

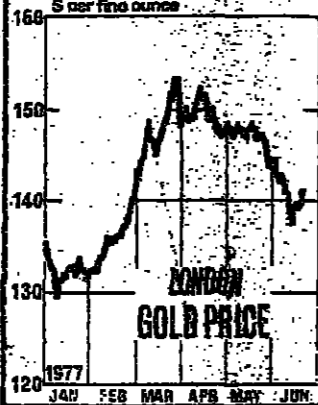
CONTINENTAL SELLING PRICES: AUSTRIA S.13; BELGIUM F.25; DENMARK D.2.5; FRANCE F.2.5; GERMANY D.M.2; ITALY L.50; NETHERLANDS F.2.5; NORWAY K.R.5; PORTUGAL Esc.30; SPAIN Ptas.40; SWEDEN K.2.25; SWITZERLAND Fr.2.0; DRS 12p

NEWS SUMMARY

GENERAL EEC to restrict aid for Uganda
Foreign Ministers of the Nine have joined Commonwealth leaders in deploring violations of basic human rights in Uganda.

BUSINESS Equities slip 3.2; gold up \$1 1/4
Equities tended to ease in subdued trading. The FT 30 share index closed at the day's lowest of 442.0, down 2.2

Censure vote
Helmut Schmidt, West German Chancellor, last night survived a Parliamentary censure vote...



Harder line
President Assad of Syria and Mr. Assir Arafat, chairman of the Palestine Liberation Organisation...

Talks agreement
France and Italy have agreed to operate in negotiations on the break application to join the Common Market...

Free business
A Peterborough businessman wants to give away his manufacturing business because of increasing paperwork...

Wimbledon
Chris Evert made a solid start in defence of her Women's Singles Title when she defeated Ruth Serrault 6-0, 6-3.

Hijack surrender
A hijacker who seized a Chilean Airlines Boeing 727 with 78 people aboard surrendered without a struggle at Mendoza Airport, Argentina...

Briefly...
Dr. Kurt Waldheim, U.N. Secretary-General has intervened personally in an effort to end a 40-day hunger strike at the J.N. Commission headquarters in Santiago by relatives of Chilean political prisoners.

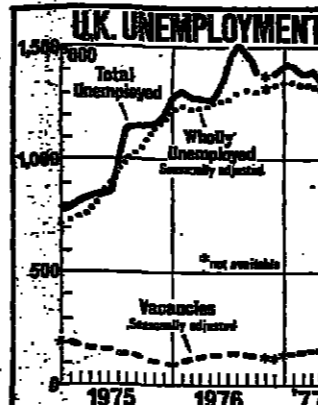
Table with 2 columns: Company Name and Profit Change. Includes PLESSEY, SELECTION TRUST, WILLIAM BAIRD, HAMEROS.

Table with 2 columns: Item Name and Price Change. Includes Whitecroft, Buffels, Harmony, Libanon, Messina, Selection Trust.

Unemployment jumps to post-war record of 1.35m.

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

The number of people out of work in the U.K. has risen sharply in the past month after declining in three out of the four previous months.



The Department of Employment announced yesterday that adult unemployment in the U.K. rose by 38,900 in the month to 1,350,000 on a seasonally adjusted basis.

Callaghan demands total loyalty from MPs

BY RICHARD EVANS, LOBBY EDITOR

MR. JAMES CALLAGHAN attempted yesterday to stamp his authority on the divided Parliamentary Labour Party by warning that unless unity was restored there would be a General Election in which Labour was certain to be heavily defeated by the Conservatives.

Goldsmith Express bid fails

BY MAX WILKINSON, INDUSTRIAL STAFF

SIR JAMES GOLDSMITH'S plan to take control of the Daily Express newspaper group was frustrated yesterday by a decision of the Beaverbrook family Standard are all trading at a profit.

Brezhnev, Giscard at odds in talks

BY ROBERT MAUTHNER

PARIS, June 21. SIGNIFICANT DIFFERENCES between the Soviet Union and France over detente and disarmament arose to-day in talks between President Leonid Brezhnev, who arrived in Paris on a three-day official visit yesterday, and his host, President Giscard d'Estaing.

Rees promises Grunwick police inquiry

BY NICK GARNETT AND PHILIP RAWSTORNE

THE GRUNWICK dispute boiled over again yesterday with some of the ugliest incidents seen at the North London factory, the arrest of peace campaigner Miss Pat Arrowsmith and a Labour MP Mrs. Audrey Wise, and strong criticism of police by other Labour MPs who had also joined the pickets.

Assistance

After the visit, Mr. Hayhoe alleged the pickets were "trying to intimidate" the workers and the police were doing a tough job in difficult conditions.

Separate

Mr. Booth responded in writing that his conclusion was that Mr. Ward had no intention to discuss the dispute with him and that Mr. Ward should reconsider his position.

If you don't give Luncheon Vouchers, someone else will...



and they'll benefit.

Someone else will gladly help themselves to your staff, bear you to the punch with new staff, and generally have a more buoyant time of it.

Form for Luncheon Vouchers with fields for Name, Company, Address, and a section for 'PRELIM STATEMENTS' and 'INTERIM STATEMENTS'.

Table with 2 columns: Features and On Other Pages. Includes Chancellor Schmidt's Troubles, The Legal Problems of Grunwick, Italian Terrorism, California Real Estate, Eritrean Nationalists, Seagraves' aims, The razor market.

LOMBARD

The all-powerful Japanese

BY GEOFFREY OWEN

Many Western businessmen regard Japanese industry with a mixture of dread and envy. Massive investment in modern facilities, a labour force with an almost inhuman dedication to work, unwavering support from the Government—all this is seen as a threat to the very existence of those Western industries which the Japanese choose to attack.

For people who think like this, I recommend a visit to the Tokyo headquarters of the Ministry of International Trade and Industry (MITI), that supposedly all-powerful agency which is thought to guide and foster Japanese companies, for a talk about the problems of the textile industry. This is what they would hear.

Surplus

Does this mean that Japan's great export drive is running out of steam? The large and apparently growing surplus on visible trade clearly shows that this is not the case. There are important sectors—steel, motor vehicles, consumer electronics, parts of engineering—which are outstandingly competitive and likely to remain so.

Similar

It is remarkably similar to what one would have heard from Britain's Board of Trade some twenty years ago, before Court stiffs and others had set about reorganising the textile industry. Japanese textiles are losing out in export markets to South Korea and other South East Asian countries; within Japan there is strong pressure for import protection.

Similar

The advances which the Japanese are already making in high-technology sectors like computers suggests that the adjustments which some Japanese companies are making about unfair competition from the West, too many "jumbo" contracts are being lost to European groups, they say, because European Governments are more willing to provide the necessary support.

Dartmoor clash between Beauty and the Army

BARONESS SHARP recommended no change in defence land holdings on Dartmoor in her report on the use of more than 30,000 acres of the Devon beauty spot for training by the armed forces.

Saleroom BY ANTONY THORNCROFT

Feather cloak for £140,000

THE RECENT interest in tribal art was well maintained at Christie's yesterday, when a sale devoted to Hawaiian and Maori art attracted £324,300.

Television for adults only

A SERIES of late-night "X" rated cinema films will be put out by Independent Television this summer under the title For Adults Only.

WIMBLEDON BY JOHN BARRETT

Solid start by Evert

CHRISTINE EVERT made a solid start in defence of her women's singles title on another cheerless day at Wimbledon yesterday when she defeated fellow American Reta Gerulaitis 6-0, 6-3.



Christine Evert shows her usual determination

Christine Evert made a solid start in defence of her women's singles title on another cheerless day at Wimbledon yesterday when she defeated fellow American Reta Gerulaitis 6-0, 6-3.

FIRST TEST BY TREVOR BAILEY

Fade-out with honours even

THE JUBILEE Test ended, as expected, in a draw, but not before several exciting strokes. Both were out at the same total immediately before lunch.



Australian captain Greg Chappell catches Bob Woolmer for 120 off Len Pascoe's bowling

England: 216 (Woolmer 79, Randall 53) and 385 (Woolmer 120, Greig 81). Australia: 296 (Sergeant 81, Chappell 66, Walters 53; Willis 7-75) and 114-5 (Knockes 50).

RACING BY DOMINIC WIGAN

Challenge for Lester Piggott

LESTER PIGGOTT makes one of his now rare appearances at Salisbury this afternoon, principally to ride Sir Jim in the Stewarts early this month.

I.V. Radio BBC 1. 6.40 a.m. Open University (UHF only). 9.30 For Schools. Colleges. 10.45 X and 36. 11.00 For Schools. Colleges. 11.25 Cricket. Benson and Hedges Cup—semi-finals. 1.30 p.m. Teddy Edward. 1.45 Ring-a-Ding. 1.55 News. 1.59 Wimbledon 1977 and Cricket. 4.15 Regional News (except London). 4.50 Play School. 4.45 Rentaghost. 5.10 Newsround Weekly. 5.35 Ludvig. 5.40 News. 5.55 Nationwide (London and South-East only). 6.15 Wimbledon 1977.

F.T. CROSSWORD PUZZLE No. 3411. 1 Full of drink or juice (6, 2). 2 Company sergeant major in charge of the world (6). 3 Soldier at sea embracing a daughter gets in a pickle (8). 4 Change choice between whistler and Frenchman (5). 5 Invaluable assistant to tear about? Certainly (8). 6 Older way to get bear right (6). 7 Chance ordinary soldiers have to lose formation (5, 5). 8 Normal routine of regular golfer (5, 5). 9 Prayer circle taken back? No Sir (8). 10 Leaving no stone unturned albeit uneven (5). 11 Figure in condition that's about socially acceptable (8). 12 Girl with inclination to be a historian (8). 13 Catch girl lower down (6). 14 Happy on board to develop country (8). 15 Master goes in twice to obtain fruit (2). 16 Professionals working inwards (6). 17 Boy giving sound guarantee for future (6). 18 On the weak side when being tried (5, 5). 19 Proposal clearly visible on river (3). 20 Health offers choice between doctor and country (8). 21 Squash taken care of by a thousand newspapers (8). 22 Chief's risk involved in securing one's own interests (6, 6). 23 Notice promise boy gets right over living (8). 24 Man of action inflamed one key worker (8). 25 Centre of attraction makes Sue cry no differently (8). 26 Fat of the land we hear (8). 27 Disastrous bell untied wrecked by early starter (6). 28 It's the different sea god (8).

ACROSS: 1 Full of drink or juice (6, 2). 2 Company sergeant major in charge of the world (6). 3 Soldier at sea embracing a daughter gets in a pickle (8). 4 Change choice between whistler and Frenchman (5). 5 Invaluable assistant to tear about? Certainly (8). 6 Older way to get bear right (6). 7 Chance ordinary soldiers have to lose formation (5, 5). 8 Normal routine of regular golfer (5, 5). 9 Prayer circle taken back? No Sir (8). 10 Leaving no stone unturned albeit uneven (5). 11 Figure in condition that's about socially acceptable (8). 12 Girl with inclination to be a historian (8). 13 Catch girl lower down (6). 14 Happy on board to develop country (8). 15 Master goes in twice to obtain fruit (2). 16 Professionals working inwards (6). 17 Boy giving sound guarantee for future (6). 18 On the weak side when being tried (5, 5). DOWN: 19 Proposal clearly visible on river (3). 20 Health offers choice between doctor and country (8). 21 Squash taken care of by a thousand newspapers (8). 22 Chief's risk involved in securing one's own interests (6, 6). 23 Notice promise boy gets right over living (8). 24 Man of action inflamed one key worker (8). 25 Centre of attraction makes Sue cry no differently (8). 26 Fat of the land we hear (8). 27 Disastrous bell untied wrecked by early starter (6). 28 It's the different sea god (8).

Congress opposition to interest proposals

By Our Own Correspondent WASHINGTON, June 21. CARTER ADMINISTRATION proposals to allow banks to pay interest on individual current accounts and to allow the Federal Reserve to pay interest on reserves deposited by member banks ran into strong opposition in Congress yesterday afternoon.

Mr. Michael Blumenthal, the Treasury Secretary, and Dr. Arthur Burns, the chairman of the Fed, both supported the principle of interest payments on current bank accounts which have been tried in a limited way in some New England states. They also supported the need for the Fed to pay its member banks interest on their deposits with the U.S. Central Bank saying that it was important if the decline in bank membership of the Fed was to be stemmed.

But Senator William Proxmire, chairman of the Senate Banking Committee, said before which both men were testifying, said that he was "troubled" by many aspects of the proposals which would amount to a bonanza for the "big banks".

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However, the bill was reported in 1972 and the Congress allowed interest-bearing current accounts in six New England states where they have been so successful that two-thirds of the financial institutions in the six states now offer them to their customers.

CALIFORNIA REAL ESTATE House prices going through the roof

BY ART GARCIA IN SANTA BARBARA THE COST of houses, old and new, is soaring in California. here are quick speculative profits to be made, but many people find that prices have risen beyond their reach.

An aerospace company at Santa Barbara has openings for 10 engineers to meet demands of recently awarded Government contract. Normally it has a waiting list of applicants eager to move to the pleasant coastal community from big cities or colder areas. But home prices having doubled in the past three years...

The \$17bn. California mortgage market has been fuelled by ample mortgage financing, primarily from the state's surpluses of savings and loan associations, but increasingly from commercial banks as well.

Speculators In some parts of the San Francisco Bay area, homes 60 to 90 days from completion are offered for resale at prices well above the original builders' cost.

U.S. consumer prices rise more slowly during May

BY DAVID SELL

WASHINGTON, June 21.

CONSUMER prices in the U.S. rose more slowly last month, the Labour-Department reported today, pointing to a much smaller rise in food prices as the principal cause.

Last month prices climbed 0.6 per cent, compared with 0.8 per cent in April while food prices rose 0.7 per cent, compared with 1.5 per cent in April.

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However, the bill was reported in 1972 and the Congress allowed interest-bearing current accounts in six New England states where they have been so successful that two-thirds of the financial institutions in the six states now offer them to their customers.

Yesterdays opposition to the proposal from committee members coincided with a clear disagreement between Mr. Blumenthal and Dr. Burns. The Treasury and the Fed have been unable to agree on a ceiling for the amount of interest the Fed should be able to pay its member banks on the deposits equal to 7 per cent of demand deposits that they keep on account with the Fed.

As presented to the Senate yesterday the bill proposes cutting of 10 per cent of the Fed's earnings but Dr. Burns said that this would not make any difference to banks faced with the extra cost of funding the payment of interest on current accounts.

lution in the home buying market that of 230,000 units for which building permits were issued in California last year, an estimated 15,000 to 20,000—between 7 and 10 per cent—passed through speculative hands. The Federal Reserve Bank of San Francisco says that in areas of strongest demand, speculative buying of residential units has reached 10 to 20 per cent. In one county salesmen believe that up to 40 per cent of new-home buyers there are looking for a quick price rise, rather than a family home.

As the profits have grown, so have the warnings from housing experts grown in intensity. There may be unpleasant surprises in store for inexperienced persons who are jumping in, confident that they will be able to sell their investment properties to someone else at a profit.

The bubble is likely to burst by the end of 1977, or in early 1978. Mr. Maurice Mann, president of the Federal Home Loan Bank in San Francisco, predicts that the supply of houses in California will catch up with demand by the end of 1977.

Oversupply "There could even be a slight oversupply of housing when the year comes to a close," he says. Mr. Harry Volk, chairman of the Bancorp in Los Angeles, similarly sees a "leveling off" of residential real estate market within a year.

U.S.-Soviet talks on Indian Ocean

BY DAVID SATTER

MOSCOW, June 21.

U.S. CHIEF arms negotiator Paul Warne arrived in Moscow today to continue discussions with the Soviet Union on demilitarizing the Indian Ocean, a favourite Soviet project.

The Russians have called for the elimination of foreign military bases in the Indian Ocean and have charged that the U.S. is building up a "whole network of strong-points" there, including expanded base on the island of Diego Garcia which serves as a communications centre for all U.S. warships in the ocean.

The Communist Party newspaper Pravda has charged that "imperialist forces" have noticeably stepped up their activity in the Indian Ocean with a view to putting vast territory adjacent to the ocean under the control of U.S.-connected military bases.

The current meeting will continue the work of a U.S.-Soviet working group set up during talks here in March by Secretary of State Cyrus Vance to deal with military competition in the Indian Ocean.

The Soviet Union admits having a facility of its own on the Indian Ocean at Berbera in Somalia and Western diplomats believe it to be a military base. The call for Indian Ocean demilitarisation, however, has been an important element of Soviet-South Asian policy and was included in a joint Soviet-Indian communique following the visit to Delhi of Soviet Foreign Minister Andrei Gromyko in April.

However, Administration year. Last month these earnings, wages adjusted both for taxes and inflation, rose 0.1 per cent. The wholesale price index has after falling 0.2 per cent in April, returned to the level of the end of the year, inflation was expected to continue, though less markedly, other components of the consumer price index are reported this morning that the little changed. There was some relative moderation in the rate of inflation has led to a slight rise in non food commodity prices was held to 0.4 per cent for the second time this for the third month in a row.

Court revives abortion debate

BY OUR OWN CORRESPONDENT

WASHINGTON, June 21.

THE ISSUE of abortion, which dogged President Carter during his election campaign and remains one of the most contentious in America, returned to centre stage today after a Supreme Court decision returning to state and local authorities the right to decide whether to pay for abortions for people on social security.

The Supreme Court legalised abortion in 1973 since when there has been fierce debate whether the Federal and State Governments should pay for abortions performed under the Medicaid system. This system provides medical care for the poorest people in the U.S., many of whom are on welfare or social security.

President Carter said last year that Government funds should not be used for abortions. He personally opposed abortion. The Supreme Court's decision legalising it must be respected, he said, but the Court had never ordered states to pay for abortions and neither states nor the Federal Government should be compelled to do so.

In effect, the Court yesterday agreed with this position, as does the powerful Right to Life movement which opposes all abortion. The Court insisted that nothing in the Constitution compels states to pay for abortions and that it should be up to each state, and even each city, to decide whether to subsidise abortions for the poor, of which 300,000 were performed in the U.S. last year.

This ruling appears to open the decision appear to leave one loophole for a return to the situation before 1973, when poor people, for by States or the Federal Government if they have to be unable to pay for private illegal abortions, were pushed towards performed for clearly "therapeutic" reasons. It now seems with tragic results. Sen. Bob Packwood of Oregon said last night that the decision was un-

fair and discriminated against poor women, and his views were echoed by others who favoured more liberal abortion laws. The Planned Parenthood Federation, for example, said the court decision re-establishes the fact that "the poor are second class citizens and, as patients, unequal to the more affluent in their opportunities for service."

Meanwhile Congress is considering a Bill to prohibit the Government from using Federal funds to finance abortions and its sponsors hope the Court decision will boost its passage.

Both this law and the court decision appear to leave one loophole for a return to the situation before 1973, when poor people, for by States or the Federal Government if they have to be unable to pay for private illegal abortions, were pushed towards performed for clearly "therapeutic" reasons. It now seems with tragic results. Sen. Bob Packwood of Oregon said last night that the decision was un-

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Protests in Peru at austerity campaign

BY NICHOLAS ASHESHOV

LIMA, June 21.

THE PERUVIAN Government's austerity campaign announced earlier this month by the new Economy Minister, Sr. Walter Plaza, in an attempt to counter the severe foreign exchange crisis, has been greeted with widespread demonstrations of protest. Police have had to be called out in a number of cities up and down the country.

The rise in the retail price of petrol, a measure aimed at strengthening the financial situation of Petroperu, the State oil company, has been badly received by the powerful road transport lobby. The transport industry's decision to pass on the rise to the consumer and in particular, the rise in bus fares have sparked off a number of demonstrations.

In the ancient Inca capital of Cuzco, in the southern highlands, a modified form of martial law is being enforced, with an all-night curfew, following street riots last week by students and peasant groups protesting against the Government's latest financial moves.

In Lima, too, there was unrest following the announcement of the measures. Approximately 50 people, originally described as students but who almost all turned out to be schoolboys aged between 14 and 16, were arrested during clashes with riot police in the lower-class Rimac district of Lima. Security police say they are still holding the majority of them.

The incidents in Cuzco and Lima were the worst of the reactions so far to an economic situation which, from the point of view of wages and salary earners, and of course the great mass of the unemployed and underemployed, is clearly becoming increasingly difficult to support.

Army and police officers privately admit, however, that they were expecting much worse, but add that they do not yet know whether things will remain quiet or whether a really serious outbreak is brewing. One senior officer's opinion is that although there will be isolated strikes and minor civil flare-ups, there will be no mass reaction at least within the next four or five months.

Bankers in New York are expecting a massive rescheduling later this year of the country's foreign debt.

Naval missile test failure

BY OUR OWN CORRESPONDENT

WASHINGTON, June 21.

THE LATEST test of an experimental version of the naval Cruise missile called the Tomahawk ended in failure this week after the weapon fell back into the sea off California only seconds after it was successfully launched from underwater.

The navy, conceding that this is the most severe setback since testing began 17 months ago, said that the missile was supposed to start its own engine soon after being shot out of a torpedo tube underwater by a rocket. The rocket worked as planned, but the weapon apparently became unstable.

At that point, stabilising fins should have opened and the missile was planned to fly some 80 miles. The navy declined to indicate the cause of the failure of the test.

The Tomahawk missile, with a planned range of 2,000 miles, is one of two types of Cruise missile now under development. Both Tomahawk, and an air launched weapon, are expected to be able to fly long distances at low altitudes using a guidance system that enables them to hop over obstacles on the ground.

Because of their flexibility—they can carry conventional or nuclear warheads—and their potential, they have become a major issue in the current strategic arms talks. It is understood that the Soviet Union still wants the naval version—and a possible land-based derivative—banned altogether, while the administration may be prepared substantially to restrict brings of the naval version for a trial period. The air version would, apparently, not be covered in any agreement.

Canada's GNP up 1.3%

OTTAWA, June 21.

CANADA'S gross national product in real terms rose 1.3 per cent in the first quarter of 1977 compared with the preceding third quarter of last year it eased 0.3 per cent.

Statistics Canada said the economy swung back to a "relatively healthy but narrowly based rate of real growth in the quarter. In the fourth quarter of 1976, real GNP—after adjust-

ment to eliminate inflation—declined 0.2 per cent from the preceding quarter and in the compared with the preceding third quarter of last year it eased 0.3 per cent.

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All shapes and sizes of firms are joining the New Gas Era.

Big new gas supplies come ashore from the North Sea this Autumn. When fully operational they will increase gas availability by nearly 40%. Of course the big fuel using industries will be taking a lot of it. But the smaller industrial and commercial companies can also enjoy the competitive advantages of gas.

Don't think you're too small to benefit. The opportunity gas offers to increase productivity and plant efficiency could make a tremendous difference to your business. It will also give a big boost to our balance of payments, and increase the efficient use of our national energy resources. That's good news for Britain, and for British companies for years to come.

The time to act is now, not when the gas starts to come ashore. Start by sending off the coupon. The Technical Sales Staff of your British Gas Region will get in touch with you to determine your accessibility to a gas supply, help you plan your future needs, and tell you about our Technical Consultancy Service. Get your name down now. Autumn is just around the corner in the competitive world of today.

The British Gas Technical Consultancy Service helps you get the maximum value from every therm of gas used, by advising on the most efficient application by industry and commerce.

Join the New Gas Era now.



To: British Gas, 326 High Holborn, London WC1V 7PT. Please ask the Technical Sales Staff of my Gas Region to get in touch about the New Gas Era. Name: Company: Position in company: Address: Tel. No. BRITISH GAS

OVERSEAS NEWS

NATIONALISTS IN ERITREA

Waiting for the crunch

BY GWYNNE ROBERTS IN ERITREA

In a thatched hut deep inside the arid Eritrean lowlands hangs a tattered poster of Cuban leader Fidel Castro preaching revolution to the masses. The placard is an essential part of the sparse furnishings to the Eritrean Liberation Front (ELF) officials who use the hut as an office, and to sleep off the torrid heat of the mid-day sun.

In Eritrea, Castro is ironically still a great hero to many young ELF guerrillas fighting for independence despite the sudden switch of Cuban support to the "enemy" in Addis Ababa. A number of ELF commanders trained in Cuba in the sixties and returned full of enthusiasm about their Cuban experience. In 1968, Castro called the Eritrean cause a "progressive revolution" much to the delight of the ELF leadership. The abrupt changes of allegiances in the Horn of Africa is a political reality many ELF fighters now find hard to come to terms with.

The Ethiopian army, apparently supported by foreign advisers, possibly Cubans, seem poised for a mighty thrust into the heart-land of Eritrea. A strong Government force has already swept through Gondar province, formerly the preserve of the right-wing Ethiopian Democratic Union (EDU). This movement's declared objective was to unseat the revolutionary military council in Addis but there now seems little hope of them achieving that.

considerations had brought the Cubans into Ethiopia but that did not mean they had changed their mind about the Eritrean revolution. There was a revolution going in Ethiopia and he suggested the Cubans had a right to take a position on that. He, like the young fighter, implied it was too early to say what role the Cubans were really playing in Ethiopia, though they may soon change their tune. The Ethiopians appear to have fought with unaccustomed vigour after being widely decried as a demoralised force—even though the EDU was never recognised in Eritrea as a guerrilla movement likely to present any serious opposition to a determined army. They were criticised here as a badly organised and equipped movement which lacked any motivating ideology. The ELF chairman wittingly described it recently as a "rabble collection" of people. But ineffective as the EDU may have been, it served as a buffer force for the ELF. Now, the Eritreans face perhaps the most serious threat to their aspirations towards nationhood

in their 16-year struggle. Morale among the ELF troops is high, especially after overrunning the town of Tessenai six weeks ago near the Sudanese border. How they meet this challenge in the coming weeks and months could well have enormous repercussions for the whole of the Horn of Africa. For the Ethiopians, the Eritreans represent much more than a military challenge. They possess heavy artillery and a guerrilla army which seems to have matured well over the past few years since my last visit here. The ELF is secretive about how well equipped its forces are but, although not over endowed, its supplies from such allies as Syria and Iraq have increased significantly during the past two years. In 1976, they could only harass the Ethiopian army. Now, they are in a position to lay siege to towns containing 1,000 to 2,000 troops. Reinforcements have been sent to Eritrea's border with Gondar province around Um Hagar. One unconfirmed ELF report said about 700 men were moved



EEC to withhold aid from Ugandan government

BY GUY DE JONQUIERES, COMMON MARKET CORRESPONDENT

FOREIGN MINISTERS of the Nine joined Commonwealth leaders today in deploring violations of basic human rights in Uganda, and agreed to take unspecified steps to withhold any EEC aid which could perpetuate them under the regime of President Idi Amin. The move was proposed by Dr. David Owen, the Foreign Secretary, who said to-night that he had information that Gen. Amin was alive and unharmed, despite recent reports that he had been assassinated. The EEC statement "deplored the consistent denials of basic human rights to the people of Uganda." It added: "The Council agrees to take steps within the framework of its relationship with Uganda under the Lomé Convention to ensure that any assistance given by the Community to Uganda does not in any way have as its effect a reinforcement or prolongation of the denial of basic human rights to its people." Dr. Owen said that no firm decision had been taken on what categories of aid to Uganda would be affected. The issue was legally and technically complex. He said that no new procedures would be established for aid disbursements, but indicated closer scrutiny would be applied to aid proposals for Uganda. M. Claude Cheysson, EEC Commissioner for Development, is expected to follow the aid procedures personally. The Foreign Secretary emphasised that the EEC had no quarrel with the people of Uganda, who would continue to need food, medical and humanitarian aid and technical training. "If you deprive the people of

these things, you deprive the future of Uganda," (sic) he said. Britain is already looking at ways of stopping bilateral trade with Uganda. Virtually all EEC aid to Uganda is provided through the Lomé Convention which links the Community with more than 50 African, Caribbean and Pacific states. One of the Convention's central elements is the "Staber" fund. This is for reimbursing Lomé Convention members for loss of export earnings when commodity prices fall. Last year Uganda received about £1m. from Staber in compensation for loss of earnings from cotton exports the previous year. It is uncertain who the contractual nature of EEC's commitments to Staber would enable it to exclude Uganda from its benefits. One possible field of a would be food aid. Some officials suggested to-night that the might make such aid conditional on arrangements to ensure was distributed to the need Uganda. Margaret Reid writes: "Crowd Agents are not suppliers and ammunition to Ugandan Army and police, Judith Hart, the Minister Overseas Development, said a written Parliamentary answer yesterday. UPR adds from Nairobi: A wave of terror and mass struck Uganda, following assassination attempt against President Amin, and hundred Ugandan refugees fled to Kenya, the government agency here said today. President Amin was definitively wounded in an ambush on Saturday, and was recently receiving treatment somewhere in Uganda, or possibly in Libya, the agency said.

Ethiopian opposition to meet in Sudan

BY ALAN DABRY

LEADERS of a number of groups opposed to the rule of the Ethiopian military council will begin talks here tomorrow to discuss co-ordinating strategy. Representatives of four or five movements are expected to attend. They are the Oromo Liberation Front (OLF), which represents the largest Ethiopian ethnic group and claims support in eight of 14 provinces; the Afar Liberation Front (ALF) which virtually controls the port of Assab; the Western Somali Liberation Front (WSLF), the Somali-backed group in the Ogaden

region; and the Ethiopian Democratic Union (EDU) which lost to Ethiopian troops ten days ago the border town of Homera taken by EDU forces earlier this year. A fifth group which may be represented is the Ethiopian People's Revolutionary Party (EPRP). Reinforcements have been sent to Eritrea's border with Gondar province around Um Hagar. One unconfirmed ELF report said about 700 men were moved

to delat, any Ethiopian attempts to cross the River Setit running along the Eritrea-Gondar border. The river is apparently beginning to flood after several local thunderstorms during the past week. An ELF official also told me the bridge was down. But there is a strong likelihood that the Ethiopians will make a determined effort to ford the river before the rains begin in earnest early next month. Then the Government would be in a position to unleash the much heralded peasants' invasion of Eritrea combined with military thrusts from Government-held towns in the province and across the border from Gondar and Tigre. If that happens, the ELF will be stretched to contain the attack and be forced to draw heavily on the combined resources of other leftist guerrilla movements in the area which have pledged support. With these, the ELF stands a good chance of holding the Ethiopian offensive.

Assad and Arafat to be tougher against Israel

BY HSIAN HIJAZI

PRESIDENT Hafez Assad of Syria and Mr. Yasser Arafat, chairman of the Palestine Liberation Organisation (PLO), have decided to take a harder line against Israel in relation to the U.S. peace initiative for the Middle East. This was announced today by Mr. Farouk Kaddoumi, chief of the PLO's political department, following a five-hour meeting between the two leaders in Damascus yesterday, which also attended. Damascus Radio today spoke about Arab and Palestinian determination to confront what it called the policy of the Likud bloc, which is now in power in Israel. The consensus here is that the emergence of a Government led by Likud constitutes a turning point in the Middle East, and has seriously eroded the chances of a settlement. There have been indications that Syria, Jordan and Egypt have raised the level of their military preparedness, along their respective frontlines with Israel. One report in the Press here has it that all three have ordered a semi-mobilisation of troops. However, a report in the Kuwaiti Al-Siyassah newspaper that Syrian and Jordanian troops have been placed in a state of

red alert, have been discour here, according to well-informed sources. Syria and Jordan said to be anxious to avoid moves which might give Likud Government an excuse carry out a pre-emptive strike against the Arabs. Syria and Saudi Arabia have begun joint efforts to reduce the tension in southern Lebanon. Damascus is known to be advised the Palestinians to a reconciliation with Lebanon Christian right-wing element against whom they are fighting in the border areas. According to Western diplomatic sources, a high-ranking U.S. State Department official who visited a number of Arab capitals last week, was assuring in Damascus that Syria, despite its pessimism, will continue to co-operate with U.S. efforts reconvening the Geneva Conference on the Middle East, or that Syrian leaders were looking forward to the forthcoming visit to the region by Mr. Cyrus Vance, the Secretary of State. Egypt is believed to be taking a similar position. Rejection of Egypt of current Libyan move for an early Arab summit conference was seen by observers as being aimed at giving President Carter the time he needs to appraise the intentions of the new Government in Israel.

Likud Histadrut 'defeat'

BY DAVID LENNON

THE LIKUD bloc, which dominates the new coalition Government in Israel, was heavily defeated in the Histadrut labour federation elections today, which represents nearly 50 per cent of the Israeli wage-earners. The Labour Party, which lost heavily in the May 17 general election, retained its absolute majority in the Histadrut. If the forecasts prove accurate (the general election forecast on

television was wrong by only per cent.) Israel faces possible clashes between the right-wing Likud Government and the Labour-dominated Histadrut. The television forecast was that Labour would win 56 per cent of the vote, compared to the 58 per cent in the last Histadrut election. Likud should win 27 per cent, compared to its previous 22 per cent.

Record Iran fire claim

BY ROBERT GRAHAM

INSURANCE claims arising from the fire damage last August to customs warehouses at Julfa on the border between Iran and the USSR are now believed to total \$44m, the largest fire claim ever in the semi-private insurance group Middle East, according to informed sources in the insurance business here. The damage was caused by two separate fires which took over three days to bring under control. Warehouse badly damaged or destroyed contained among other things large quantities of parts and units for Iran's automotive industry, and

valuable plant, machinery and chemicals. The national insurance company, Bimeh Markazi, has 50 per cent, has been the company most directly involved. The semi-private insurance group Bimeh Iran has responsibility for providing cover for all goods not cleared by customs after 4 days: many of the goods had been held beyond this time at Julfa. According to insurance sources here the London reinsurance markets, Germany, Switzerland and to a lesser extent New York have been involved on the Iran's automotive industry, and

S. Africa mine labour call

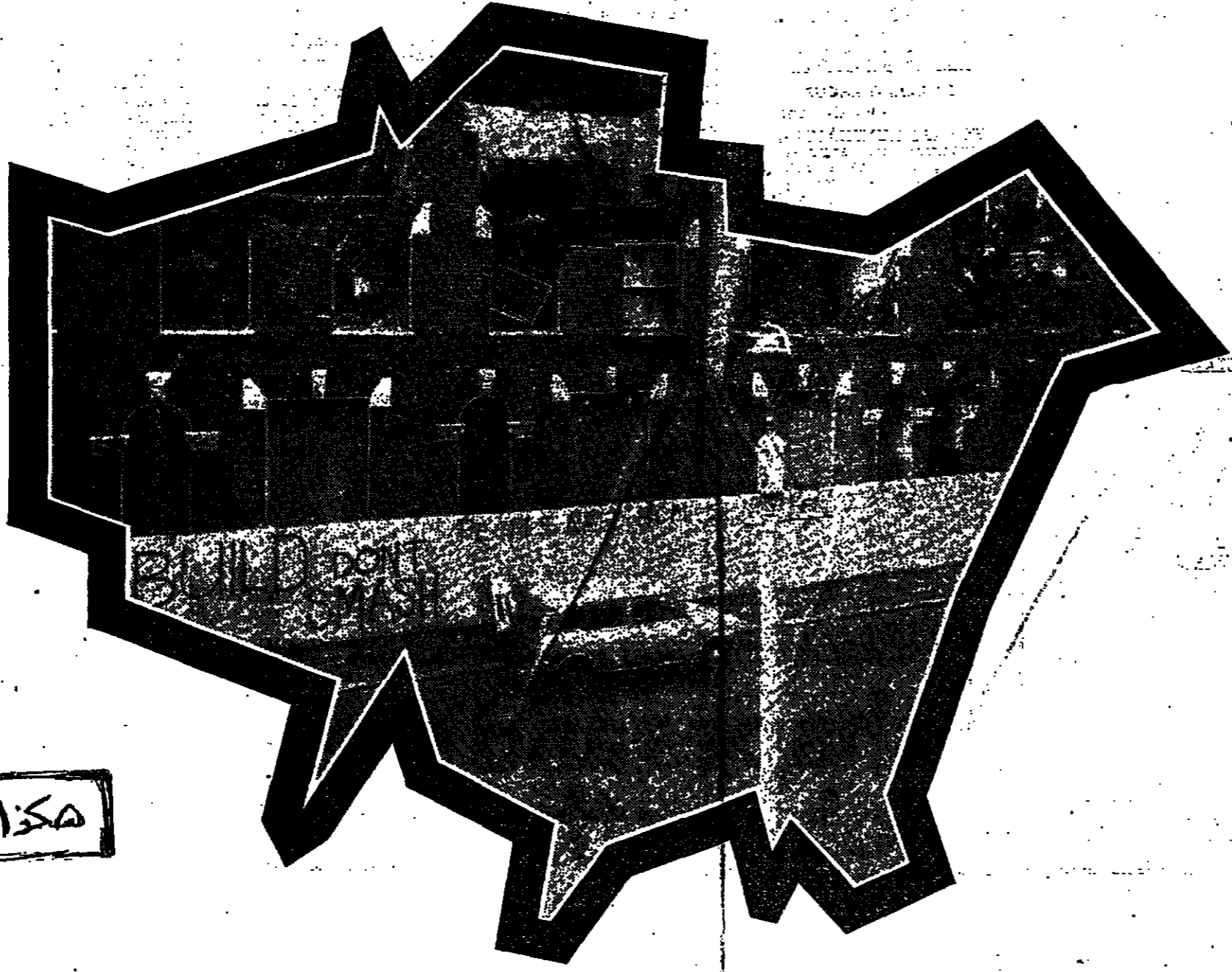
By Quentin Peel

JOHANNESBURG, June 21 RESTRICTIVE labour practices, preventing the full use of both black and white workers in the South Africa mining industry, must be ended to enable the industry to remain fully competitive on world markets, Mr. Robin Plumbridge, president of the South African Chamber of Mines, declared in his presidential address today. South Africa would depend on export-led growth, generated primarily by mineral exports, to participate in any world economic recovery, he said. Inflation must be curbed within the country, if the mineral industry was not to become "increasingly less viable" in the world markets. Improvement of labour productivity was of critical importance in combating inflation, Mr. Plumbridge said, and this required "a significant breakthrough which will depend upon employing fully the human resources of this country." There is no more vital task than to lift restrictions and curbs on the economic system to enable people of all races to participate equally in the open market place. Mining news, Page 26.

S. Korea raises defence outlay

By Douglas Ramsey

TOKYO, June 21. SOUTH KOREA is to increase defence-related spending to 3 per cent of the 1977 budget, the first step in a previous announced policy of strengthening the country's defence between now and 1982. By that President Carter has said, a U.S. ground troops in South Korea will have been withdrawn. The defence spending increase was announced in Seoul today as part of a supplementary budget package presented to the National Assembly by Prime Minister Choi Kyu-hah on behalf of President Park Chung-hee. The original budget for calendar year 1976 called for \$2bn. in defence-related spending out of a total \$5.5bn. budget, or 36 per cent of the total. The supplementary budget will add about \$440m. to overall spending, with more than 60 per cent of the total earmarked for defence. Most of the additional \$364m. on defence will be provided as incentives for private companies to invest. ON OTHER PAGES International Company News: Italian steel row ... 31 Meeting Lynch new services ... 31 Farming and Raw Materials: Brazil cocoa crop prospects ... 35 EEC farm talks ... 35



What future for London?

Thames Television's Jubilee project London Looks Forward, designed to study and awaken interest in the future of London, is culminating in three events.

Tonight, in the Thames ITV area only, most of the evening's viewing will be devoted to a two-part special programme. The Living City & The Future City begins with a ninety-minute documentary at 8.30, and continues after News at Ten with a live debate until midnight.

On July 4 HRH Prince Philip Duke of Edinburgh will open the London Looks Forward Conference at the Queen Elizabeth Hall. For two days the representatives of national and local government, public authorities, business and industry, trade

unions and many other interested bodies will meet to discuss future policy and action over jobs, housing, transport, and the social and cultural life of London.

And on July 6 at 7.00pm HRH the Duke of Edinburgh will take part in a final programme reporting to viewers on the conference and its outcome.

London Looks Forward is a unique project, which aims not only to stimulate debate on the vital issues of London's future, but also to communicate these issues as widely as possible to the people of the capital city. We hope it will prove to be a fitting and constructive contribution to the Queen's Silver Jubilee Year.



Thames Television 306-316 Euston Road, London NW1 3BB. 01-387 9494

WORLD TRADE NEWS

Community agrees textile stance

BY DAVID BUCHAN

BRUSSELS, June 21

THE EEC COUNCIL today unanimously agreed on a common view on textile products. Disputes over the Nine want to see the reaction by some member states. This is the Brussels view of the reaction by some member states. This is the Brussels view of the reaction by some member states.

EUROPEAN COMPLAINTS that Japan is bombarding some EEC industries with its exports while keeping Japan's own imports of finished goods at an artificially low level "ignore" the basic facts of Japan's trading situation, according to a confidential assessment circulating inside the Ministry of Finance (MOF).

Japan adopts hard line on EEC issues

BY DOUGLAS RAMSEY

TOKYO, June 21

an effort to undermine European competitors in that sector. Japan is not an open market for European exporters because finished goods only represent about one-fifth of Japan's total imports.

show that if GNP, free access and market size are taken into account, Japan really should be selling far more of both cars and steel to the EEC. On cars, 1973 to 1975 per cent. two years later. (In the same period, the "natural" EEC share would be 48 per cent. of total Japanese car exports.)

That restraint is needed is undisputed by all Nine member states. The MFA, a multilateral umbrella with a set of broad minimums under which bilateral negotiations between textile exporter and importer take place, is seen by the Commission as helping to Europe beat an "orderly retreat" out of an old fashioned industry in the face of low cost third world, and particularly Asian, competition.

Written as a rebuttal to European protests about Japan's trade policy, it seems not meant to be a public attack on Japanese import and export practices during his visit to Tokyo in April, Mr. Dan's document is, it seems, not meant for delivery to the EEC side in writing. Instead, reliable sources say, the paper was prepared for the use of Japanese officials and reflects the basic stance Tokyo negotiators will adopt in future trade talks with the EEC.

MR. TAKEO FUKUDA, the Japanese Prime Minister, has asked the Finance and Trade Ministers and the Central Bank to form a liaison council to assist some industries hit by recession, such as textiles, aluminium refining and small-scale steel making. Reuter reports from Tokyo.

The MOF paper tackles the second European charge in much the same vein. Car and steel exports to Europe, it says, were 11.2 per cent. and 5.6 per cent. respectively of Japan's total car and steel exports to the world in 1975. (As a share of total Japanese exports to the EEC, cars were 13.3 per cent. and steel nearly 7 per cent.)

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U.K. group wins order in Jordan

BY RAMI G KHOURI AMMAN, June 21

HOWARD HUMPHREYS, a U.K. consultant civil engineer, has won an agreement for a consultancy to increase the water supply to the southern port city of Aqaba. The project is worth more than \$50m.

U.K. discusses export strategy

BY LORNE BURLING

WAYS OF improving Britain's export performance and trade position in general are expected to dominate discussion at an industrial strategy conference, chaired by Mr. Callaghan, the Prime Minister, being held today.

Saudi deal for Germany

A consortium of three German companies led by Siemens AG have received an order valued at DM500m, from Saudi Arabia to supply 11 transformer stations and to expand its existing 13 stations in the Kingdom, Siemens said. AP-DJ reports from Munich.

Distillers to defend distribution

BY KENNETH GOODING

A TEAM from the Distillers Company (DCL), which accounts for about half the Scotch whisky sold globally, is to meet representatives of the EEC Commission today to defend its distribution policies in the EEC countries.

The group has insisted that, over the past ten years, the biggest growth of its whisky brands, especially in Europe, has taken place outside the big cities. The appointed distributors had achieved this because they were prepared to spend their money on promotion, DCL has maintained.

بنك أبوظبي الوطني NATIONAL BANK OF ABU DHABI Balance Sheet as at 31st December 1976 LIABILITIES 1976 U.A.E. DH. 1975 U.A.E.DH. ASSETS 1976 U.A.E. DH. 1975 U.A.E.DH. CHAIRMAN Ahmad Khalifa Al-Suwaidi VICE CHAIRMAN Mohamad Al-Habroush CHIEF EXECUTIVE G Jenkins-Jones Head Office: P.O. Box 4, Abu Dhabi, United Arab Emirates. Telephone: 43262 Telex: 2266/1 ALMASRAF AH. Cable: ALMASRAF

NORTHERN ROCK BUILDING SOCIETY CHANGE OF INTEREST RATES INVESTMENTS From 1st July the rates of interest payable to existing and new investors will be reduced. The new rates will be: Preference Shares 6.70 10.31 Savings Accounts 6.70 10.31 Personal Deposits 6.45 9.92 Subscription Shares (including 1.50% bonus) 7.95 12.23 S.A.Y.E. (no change) up to 8.62 up to 13.26 Extra Income Shares 2 Years 7.20 11.08 3 Years 7.70 11.85 MORTGAGES From 1st July the rate of interest charged to borrowers for owner occupier private dwelling house repayment mortgages will be 10.50% p.a. Individual notices quoting revised monthly instalments will be sent to all borrowers as soon as possible. Save safe with Northern Rock A Countrywide Building Society

HOME NEWS

Compensation for shipyards faces snags

BY ROY ROGERS, SHIPPING CORRESPONDENT

COMPENSATION TERMS for machinery was not needed. Robb Caledon and John G. Kin-... although compensation talks... Vesting Day. ... Department of Industry... machinery was not needed... Vesting Day. ... machinery was not needed...

Last bid to sway Parsons workers

BY MAX WILKINSON

MR. ERIC VARLEY, the Industry Minister, is expected to make a last attempt today to win unions round to his plans for a merger of the turbine generator industry... Parsons workers... ERIC VARLEY, the Industry Minister, is expected to make a last attempt today to win unions round to his plans for a merger of the turbine generator industry...

Payout likely for car policy holders

BY KEITH LEWIS

HOLDERS OF around 750,000 motor insurance policies in ten failed insurance companies... BRITAIN'S major tour operators remained broadly profitable last year... Payout likely for car policy holders... HOLDERS OF around 750,000 motor insurance policies in ten failed insurance companies... BRITAIN'S major tour operators remained broadly profitable last year...

Travel profits down

BY ARTHUR SANDLES

BRITAIN'S major tour operators remained broadly profitable last year, but their performance was not as good as in 1975... TOUR COMPANY PROFITS (U.K. Top 30 companies) ... Travel profits down... BRITAIN'S major tour operators remained broadly profitable last year, but their performance was not as good as in 1975...

Amount of plutonium 'hardly alters risk of theft'

BY ARTHUR SANDLES

THE POSSIBILITY that terrorists could steal plutonium and make a crude nuclear bomb was admitted by Mr. Cyprian Allday, managing director of British Nuclear Fuels... Amount of plutonium 'hardly alters risk of theft'... THE POSSIBILITY that terrorists could steal plutonium and make a crude nuclear bomb was admitted by Mr. Cyprian Allday...

Flow of new building work slows down

BY MICHAEL DIXON, Education Correspondent

THE FLOW of new orders for the construction industry slowed down from February to April... Flow of new building work slows down... THE FLOW of new orders for the construction industry slowed down from February to April...

Tameside ready with secondary schools report

BY MICHAEL DIXON, Education Correspondent

THE TAMESIDE local authority is to accede to a new demand by Mrs. Shirley Williams, Secretary for Education... Tameside ready with secondary schools report... THE TAMESIDE local authority is to accede to a new demand by Mrs. Shirley Williams, Secretary for Education...

Watery washing-up liquids
BUYERS OF washing-up liquids, market in which the shopper has attracted by the packaging to choose between heavily coloured of the fluid and its smell, advertised 'super-concentrated' are buying up to 90 per cent. of brands and others containing water with some brands, accord higher amounts of purified water. To Nottinghamshire county council's consumer protection even funny, its report notes. The department. The department has that some of the cheaper contain been examining the £45m. a year 90 per cent water.

WINDSCALE INQUIRY

Mr. David Widdicombe, for Windscale Appeal, asked Mr. A day whether it was safe to handle plutonium with bare hands. If rubber gloves were needed, Mr. Allday replied that he would not handle plutonium with bare hands. The use of rubber gloves depended on the radioactivity of the material. He agreed that it was possible to have human tissue intensely damaged by a very small particle of plutonium, but argued against the assertion that it was the biggest single explosive in the world. The contamination created I release of plutonium depends on the concentration, he said pointing out that both Nagasaki and Hiroshima — the two Japanese cities A-bombed in 1945 — were now inhabited again. Asked Mr. Widdicombe: "Wh is happening to the plutonium stocks you are building up? I you think they will add to I pressure for a fast breeder programme?" Mr. Allday answered: "I thin people will recognise this as source of power. I think it w be argued that we have availab this massive source of energy but I think the final decision i any public inquiry on the matt will depend on the integrity of the inspector." The hearing was adjourned until 11 a.m.

ASH fumes at smoky airline cabins

BY CHRISTOPHER DUNN

FOR A FLIGHT free of smokers, Finnair, the first airline to cater for non-smokers in 1969 still bans smoking on all domestic flights lasting less than 40 minutes. However, its only British route is to and from Helsinki. Other airlines are catching up. ASH, which launched a new campaign on non-smokers' rights six days ago, questioned 62 airlines and 56 replied. Of these, 41 now provide smoke-free seats, compared with 32 in 1975. The date of the last survey.

The average proportion of seats set aside for non-smokers is now 40 per cent. (1975: 25 per cent.), and in the last two years, 32 airlines have improved non-smoking accommodation. Passengers should be able to book non-smoking seats, and on short domestic flights smoking should be forbidden. It wants the provision of non-smoking accommodation to be among the criteria for licensing aircraft to land in Britain. In the league table compiled by ASH on facilities for non-smokers, British Airways tied for third place with TransWorld Air Lines, behind Finnair and Czechoslovak Airlines.

New start for property developer £27m. in debt

BY CHRISTOPHER DUNN

FORMER property developer Mr. William Jack Godfrey, 50, whose debts from a 1975 bankruptcy may eventually exceed £27m., yesterday successfully applied for his discharge. The offer to pay creditors £1,000 within two years was accepted. He carried on business in Bournemouth.

Mr. Godfrey, now a consultant surveyor earning £217 a month, gave guarantees on behalf of companies that crashed after the collapse of the property market. His wife also went bankrupt and has been discharged. He said that a divorce was pending. Mr. Derek Thorne, Official Receiver, said in London bankruptcy court that there were three preferential creditors for £5,612. Unsecured creditors for more than £3m. had made claims and further claims might exceed £24m. Assets had so far realised £56,816, and any dividend to unsecured creditors would be small.

STEEL INDUSTRY PROFITS Coping with the effect of too few orders

BY ROY HODSON

THE SELECTIVE price increases for a minority of iron and steel products in the last fortnight are seen as an attempt by the steelmakers to wrest some profit from the trade when and where they can, rather than a sign that all British-made steel is going to be dearer. The latest move has been British Steel's decision to revise its prices of some steel billets and bar of pig iron, steel sections, and rails from July 10. Customers will pay about 7 per cent. more. Earlier in the month the private sector took a lead, with several member-companies of the British Independent Steel Producers' Association applying rises averaging about 5 per cent. on some sily steels. Most of these items went up by 10 per cent. last October. Overall, the international steel market shows hardly any discernible signs of recovery. Too much steelmaking capacity is chasing too few orders throughout the Western world. The U.K. price movements demonstrate the determination of British private and public steelmakers to be flexible about pricing—more flexible than they have ever been in the past—but to chase 'penny penny' piece that can be made. The recent increases are largely linked with the iron and steel needs of the motor industry for car chassis and components. They are not aimed at what the bricker motor business can bear, and to secure a profit margin for the steelmakers in what is at present a largely profitless industry. Sir Charles Villiers, chairman of the State-owned British Steel Corporation, which lost £100m. in 1976-77, does not believe the Corporation can move into profit through better trading and higher prices for at least the next six months. Most private sector companies are joggling along while continually postponing further their guesses about when the market will turn up decisively. There was some optimism earlier in the year about an autumn revival in steel demand. But now it is thought a more realistic estimate that steelmakers must wait until early 1978 for better times. The most difficult steel to sell remains plate, structural steel for building, and cold reduced sheet for the motor industry. Surpluses throughout Europe will make it difficult for home producers to apply increases in price. The most difficult steel to sell remains plate, structural steel for building, and cold reduced sheet for the motor industry. Surpluses throughout Europe will make it difficult for home producers to apply increases in price. The most difficult steel to sell remains plate, structural steel for building, and cold reduced sheet for the motor industry. Surpluses throughout Europe will make it difficult for home producers to apply increases in price. The most difficult steel to sell remains plate, structural steel for building, and cold reduced sheet for the motor industry. Surpluses throughout Europe will make it difficult for home producers to apply increases in price.

to show profit on production programmes. But there are some positive signs. There is a slow improvement in the French market for some types of building steel: the European Commission estimates that in the Community as a whole consumption may rise by 2 per cent. to 3 per cent. during the year compared with the slump conditions of last year. Much will depend on the effectiveness of the Community's Davignon Plan for observing minimum prices if the crisis of the market during the crisis. Fernand Brum, director general of the industrial affairs of the European Commission has told the European Coal and Steel Community Consultative Committee that steelmakers must stick to the twin disciplines of limiting production and holding minimum prices if the crisis measures are to succeed. An early indication of return of confidence to the British steel market will be an upturn in demand for scrap. So far there are no signs of such a movement. Scrap prices remain about £28 a tonne, where they have slumped for months after last year's short rise to nearly £50. The steel stockholders are traditionally well-tuned to detect market tremors. Most British stockholders are either trading quietly at reduced stock levels or continuing to run down stocks in their warehouses. There is no evidence yet of a stockpiling in anticipation of a boom.

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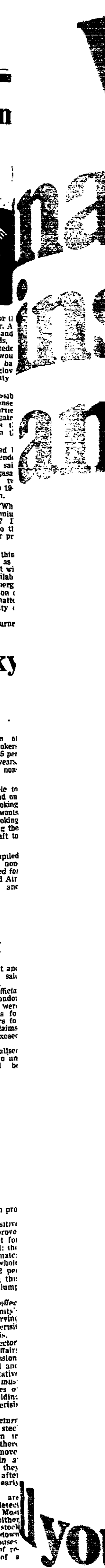
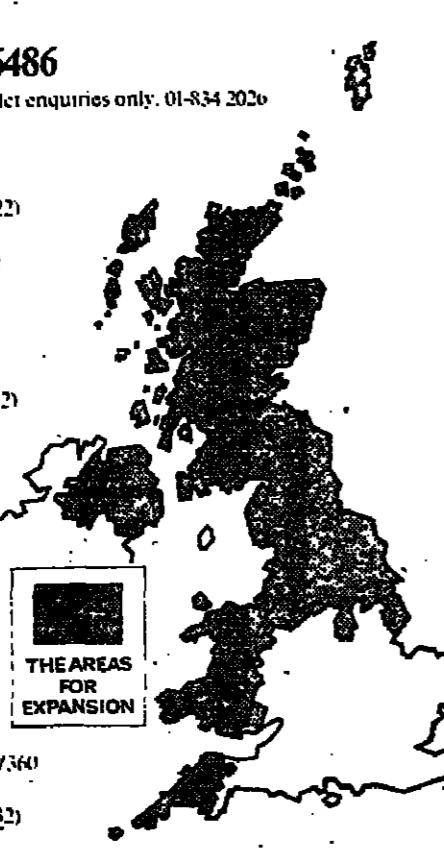
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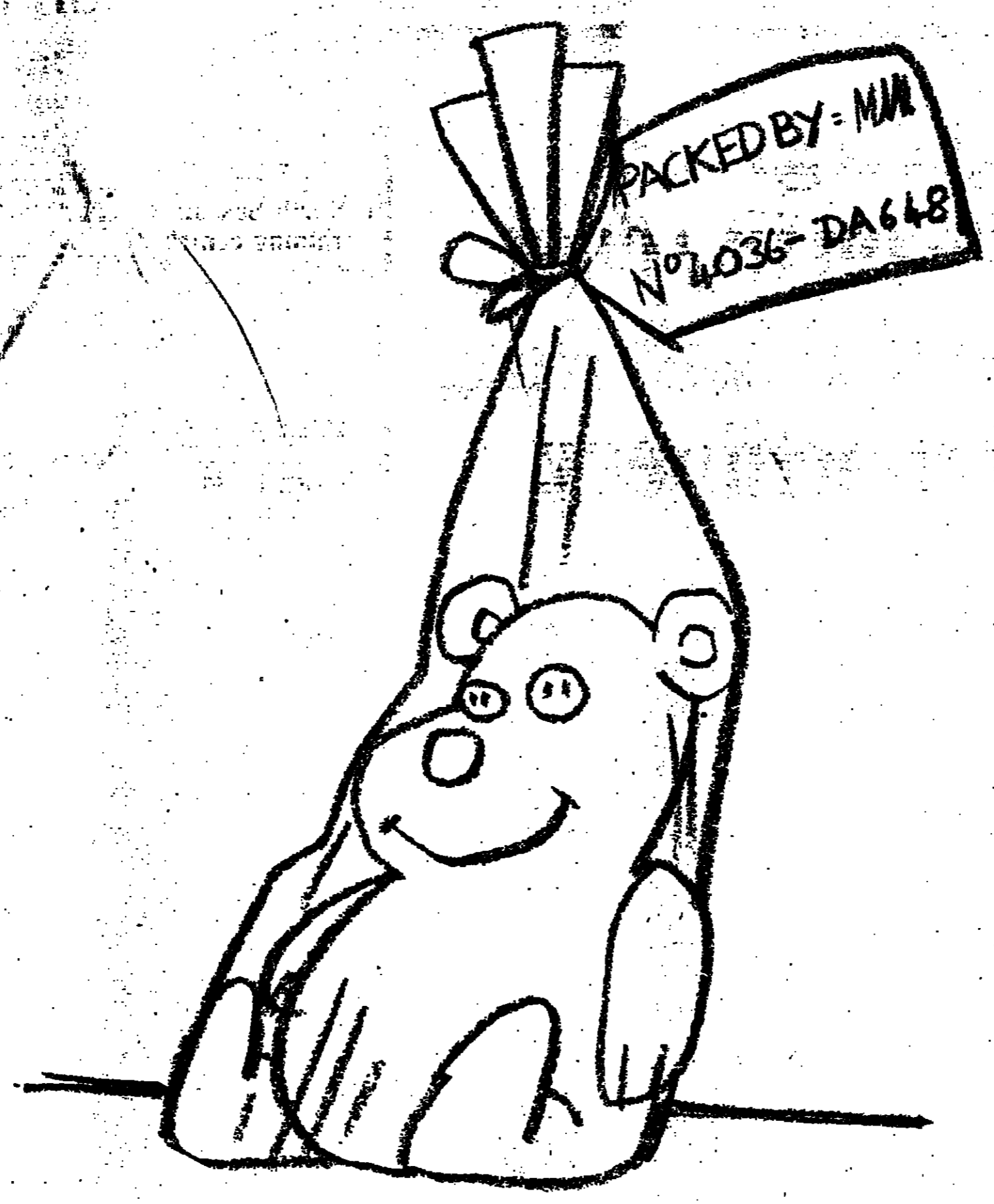
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EXTERNAL BORROWING SURVEY

Oil price rises push up many countries' debts

BY OUR FOREIGN STAFF

DURING the last week international banks have had through their letterboxes an eight-page document showing how much each of 148 countries is due to pay them back or re-borrow in foreign currency this year.

Although the idea of breaking down countries' debts according to when they are due to be repaid is not new, this is the first time that figures are coming out which give an indication of the demands which repayments of external debt are making on countries' foreign currency resources in the current year.

The World Bank has published data regularly, but always with a considerable time lag. There has been international concern about the rising external debt of some countries for decades.

The problem has become much more widespread, however, since the rise in oil prices in 1973, for a very large number of countries sought to cover the increased cost of their oil purchases by borrowing abroad.

Eastern Europe has also borrowed heavily in an attempt to modernise its economy.

Crude context

Given time, the new data which the Bank for International Settlements is circulating will be subjected to sophisticated analysis by institutions like Morgan Guaranty whose estimates of the total debt of selected countries are shown in the table.

The figures being circulated by the BIS for selected countries are therefore set out below. An attempt, albeit somewhat crude, has also been made to put them into context (on the grounds that a crude context is better than no context at all).

The new data on maturities is set out in column 4. Column 5 shows the total loans which foreign banks have on their books to all entities in each country—from individuals to the Government and central bank.

Column six shows the proportion of this not due to be repaid until 1979, at the earliest.

The three columns do not add up to 100 per cent because some reporting banks did not allocate exactly.

Hard currency

Column eight shows the amount due to be repaid this year in billions of dollars while

column nine attempts to put this into the context of the country's total 1976 exports of goods and services as shown in the IMF's monthly publication, International Financial Statistics.

In the case of the Eastern Bloc countries the figures shown are estimates of exports to the hard currency area only. The East German figure includes trade with West Germany.

The figures in column nine have to be treated with particular care. For example, investment projects reach pre-determined stages of construction and they represent an expected foreign currency inflow for the future.

Again, some countries debt may be more than counter-balanced by deposits abroad—Venezuela is a case in point here.

Again, for a few countries, transfers of funds by private individuals from abroad would greatly augment the export figures, notably in the case of Turkey.

Gold sales

On the face of it, the Soviet Union's position looks particularly bad with over \$6bn. due this year. But much of this could be explained by short-term money market operations. Moscow could always sell gold if necessary.

East Germany and Hungary, both countries with better than average credit ratings, also have a large part of their debt maturing this year, and both are bound to be active borrowers in the foreseeable future due to the serious difficulties on their hard currency trade.

Romania and Bulgaria, though only small debtors by comparison, also have heavy liabilities this year, and little in the way of deposits or unused credits to draw on.

As expected, the figures show that Poland, whose debts are proportionately by far the biggest in the bloc, has a breathing space before the bulk of its liabilities mature at the end of the decade, by which time its new investments should be fully productive.

However, concern has already been voiced that maturities in 1979-80 could prove exceedingly heavy, and that repayments could be complicated by economic and political difficulties on the home front.

Argentina's fate is in the hands

of the commodities markets in that continuing high prices for its massive exports of cereals and meat should ensure the Buenos Aires Government against embarrassment in 1976. Argentina would however be particularly vulnerable to a fall in such prices.

Chile and Peru are both hard hit at the moment with the former country having to face a particularly bad distribution of the maturities of its bank loans. The Chileans are extremely dependent on the international price of copper, the commodity which supplies about three-quarters of their export receipts.

Peru is in much the same situation, although it does not depend as heavily as Chile on copper sales. How to tackle the debt burden has been the subject of fierce debate in Lima, Venezuela has no debt problems.

Overall figures for the Soviet bloc show a very unfavourable maturity structure with nearly half the debt due for repayment by the end of this year. In fact its liabilities in 1977 exceed the latest estimates of combined deposits with Western banks plus unused credits.

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Romania and Bulgaria, though only small debtors by comparison, also have heavy liabilities this year, and little in the way of deposits or unused credits to draw on.

As expected, the figures show that Poland, whose debts are proportionately by far the biggest in the bloc, has a breathing space before the bulk of its liabilities mature at the end of the decade, by which time its new investments should be fully productive.

However, concern has already been voiced that maturities in 1979-80 could prove exceedingly heavy, and that repayments could be complicated by economic and political difficulties on the home front.

Argentina's fate is in the hands

COMMERCIAL BANKS

Table with columns: Developed countries, Borrowing, Due 1979, Due 1977, % of total, % of exports, Unused credit, Total debt. Rows include Finland, Greece, Norway, Portugal, S. Africa, Spain, Yugoslavia, E. Europe, Bulgaria, Czech, Germany, Hungary, Poland, Romania, USSR, Latin America, Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Jamaica, Mexico, Peru, Venezuela, Middle East, Egypt, Iraq, Israel, Jordan, Oman, U.A.E., Other Africa, Algeria, Ivory C., Kenya, Nigeria, Sudan, Tunisia, Zaire, Zambia, Other Asia, Indonesia, S. Korea, Malaysia, Philippines, Taiwan, Thailand.

Leasing industry expects to break record

BY JAMES McDONALD

BRITAIN'S LEASING industry had a record year last year and expects its leasing commitments to rise further this year, according to the Equipment Leasing Association, which claims that its 30 member companies account for 80 per cent of the leasing business in the U.K.

The annual report of the association said members were optimistic that this year, particularly in the later months, would see an improvement in capital investment by industry.

Lessor predicted "a more stable demand pattern and a leading level of borrowing costs," which should produce stable rental rates for companies leasing new plant and equipment.

Restrictions on money supply introduced in 1976 will have on the availability of leasing facilities towards the end of 1977 but still expects its members to handle an increased volume of business.

Generally demand for the leasing of very high value equipment has been good. The report gives the example of several members of the association recently forming a consortium to provide £70m. of lease finance for extension to a major oil refinery.

LEGAL NOTICES

ALFA ROMEO PRODUCTS LIMITED IN LIQUIDATION. NOTICE is hereby given to the creditors of the above-named company, which is being wound up as insolvent, to present their claims to the liquidator.

APPOINTMENTS

Senior executive posts at Ransomes Sims & Jefferies. Mr. F. L. Johnson is to become technical director, joined Senior Board director of engineering for RANSOMES SIMS AND JEFFERIES from July 1977.

OVERSEAS PROPERTY

PRINCIPALITY OF MONACO MONTECARLO • 7, AVENUE SAINT ROMAN Residence du Parc Saint Roman. Situated very close to the Country Club, to the beach and to the Sporting Club. Two luxury buildings surrounded by a 9,000 sq.m. park with swimming-pool, panoramic view of Monaco and of the sea.

SOTOGRADE COSTA DEL SOL (SPAIN) 2,046 sq. m. LAND FOR CONSTRUCTION. FULLY DEVELOPED, WONDERFUL LOCATION, RESIDENTIAL AREA, NEAR GOLF COURSE. APPOINTMENTS: GOURMET, PERSONAL, ROYAL SPITHEAD REVIEW, PUBLIC NOTICES.

State oil company finds well dry

BODL, a subsidiary of the E National Oil Corporation plugged and abandoned as hole Well 16 on Block 211, the U.K. sector of the North Sea. This well is in the same as the 'Thistle oilfield while recoverable reserves estimate about 500m. barrels and could enter production late year.

Price order for golf hotels

The licence group including Santa Fe, Deminor, Trice North Sea, and Charrier Petroleum Development.

THE PRICE Commission

issued an order forbidding 120 or so hotels in the area of the championship to raise their tariffs above non levels from July 1 to July 6.

HOME NEWS

Oil policy could cost Britain £600m.

BY RAY DAFTER, ENERGY CORRESPONDENT

OIL companies could lose more than £600m in revenue in the next five years if the Government struck to its stated refinery policies...

Energy conservation plan on the way

BY RAY DAFTER, ENERGY CORRESPONDENT

THE GOVERNMENT is preparing a new energy conservation programme to restrain fuel imports once North Sea oil and gas begin to run out...

Petrochemical feedstock unlikely to alter radically before 1990

BY KEVIN DONE, CHEMICALS CORRESPONDENT

ANY RADICAL change of feedstock for the petrochemical industry is unlikely before the 1990s...

A VIEW OF FUTURE ENERGY SOURCES IN THE U.K. Table with columns for Era, For Space Heating, For Power, For Road, For Air Transport, For Petrochemical Production.

Over the next decade, however, both lighter and heavier fractions of the oil barrel would be used for the production of olefins—ethylene, propylene and butadiene...

gasoline would probably be required in quantity in the U.S. where cheap open-cast coal would be available...

National Water Council raises £24m. Euroloan

BY DAVID FREUD, INDUSTRIAL STAFF

THE National Water Council the Yorkshire, Northumbria and the additional South West water authorities...

BP to sell Unipart car spare parts

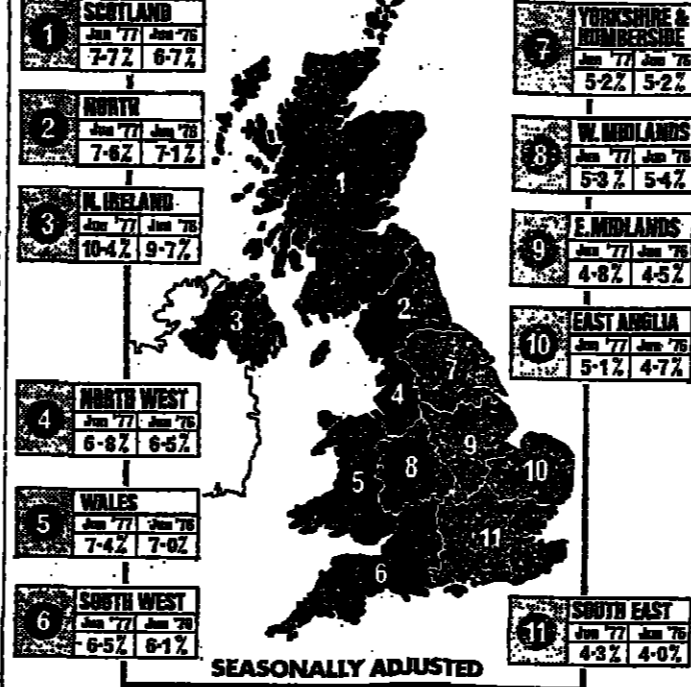
By Christopher Dunn

UNIPART, the British Leyland subsidiary, has negotiated a spare parts deal with BP and National Benzole...

Airport expects 200,000

PRINCESS ALEXANDRA expects a new £2.4m. passenger terminal at Aberdeen Airport yesterday...

UNEMPLOYMENT



Differences in the percentage figures for those out of work between areas of traditionally high unemployment and the rest of the country widened again slightly last month...

Coal Board wants to avoid Belvoir probe

BY OUR SHEFFIELD CORRESPONDENT

THE NATIONAL Coal Board is with a planned total annual output of 7m. tonnes of coal—put of 7m. tonnes of coal—equivalent to about five of the 1968 'B' and 'C' mines...

Share in U.S. project

BY DAVID FISHLICK, SCIENCE EDITOR

THE NATIONAL Coal Board has secured a foothold in U.S. plans to build a \$334m. (£194m.) gas-to-a-high-grade, low-sulphur demonstration plant...

Fluoride Alcad spending £5.5m. on battery project

FLUORIDE Alcad is spending £5.5m. on new facilities in a bid to establish world leadership in the design and production of nickel cadmium batteries...

Drought hit W. Country holidays

VISITORS spent £500m. last year on holidays in the West Country, Britain's leading tourist region—and it would have been more but for the drought...

LABOUR NEWS

Post Office Engineering Union rejects pay curbs

BY OUR LABOUR STAFF

DELEGATES to the 125,000-strong Post Office Engineering Union's annual conference in Blackpool yesterday decided to reject any further phase of pay restraint...

Young 'must be trained in vital skills'

By Our Labour Staff

BRITAIN'S economic recovery could be jeopardised by industry's failure to train young people in vital skills...

Lift maintenance men to meet tomorrow

BY PAULINE CLARK, LABOUR STAFF

An unofficial strike by more than 1,000 maintenance men in the Otis network entered its fifth week yesterday...

Sex discrimination row over teenage job plans

FINANCIAL TIMES REPORTER

AN ACCUSATION of sex discrimination was made yesterday against the Manpower Services Commission's proposals for countering teenage unemployment...

No progress

BY PAULINE CLARK, LABOUR STAFF

THE East London hospital workers' back-pay dispute spread to a second major teaching hospital yesterday when a number of porters at St. Bartholomew's failed to turn up for casual overtime...

Unemployment

Britain was now paying for a long period of slack management and technological research and development, and probably insufficient market research coupled with a lack of control on the export of capital...

It was the responsibility of the trade union movement to make clear to the Government that today's unacceptable level of unemployment would not be tolerated...

Referring to reports of over-capacity in shipbuilding throughout the world Mr. Edmondson said: "We must oppose any reduction in shipbuilding capacity, or unemployment of shipbuilding workers, while our seafaring brethren are compelled to work hard and live in sub-standard ships..."

NEWS ANALYSIS FORD DISPUTE

Live issue of lay-off pay

BY ALAN PIKE, LABOUR STAFF

THE STRIKE at Dagenham, the production process—and literally at the end of a huge line which conveys car bodies between the two adjoining factories...

Disputes Many car workers have little patience with such disputes. When 3,000 men were laid off by the sore wrists incident it brought to a head a confrontation which began developing since February...

Problem Ford workers sent home because of disputes at outside suppliers receive 50 per cent basic pay from the lay-off fund. But there is no payment whatsoever for strikes within Ford...

Control The management sees such a solution as able to financing strikes by its own workers and believes that it would make unofficial walkouts more difficult to control...

The company is convinced the solution must come by preventing minor disputes which can have widespread repercussions. And here it hopes that the assembly plant may produce positive pressure on union officials and fellow shop stewards to help resolve some of the difficulties elsewhere at Dagenham...

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- Lehman Brothers Incorporated
- Reynolds Securities Inc.
- Warburg Paribas Becker Incorporated
- Wertheim & Co., Inc.
- EuroPartners Securities Corporation
- Robert Fleming Incorporated
- Scandinavian Securities Corporation
- UBS-DB Corporation

June 17, 1977

GARDENS TO-DAY

Where fashion leads in the choice of plants

BY ROBIN LANE FOX

THE DISAPPEARANCE of so many old violets, noted last week, leads me to reflect on plants with which fashion has replaced them. I have beside me an old nursery catalogue of the 1920s and I am tantalised by all which it could have offered. The hepatica, for example, is a relation of the spring anemone which has now dropped out of most gardeners' interest. But in 1923 we could have bought any one of the choice of seven—pinks, whites, blues, and even doubles.

At least these spring flowers have been replaced by a better, if little known, variety, bred as a hybrid. Sold as *Hepatica media*, its large sky-blue flowers are as fine as you could imagine. I have seen it once as an edging to a shaded bed grown in a line some 5 yards long. It is not easily forgotten. The owner remarked that it was difficult to divide but could be split if disturbed as soon as its flowering was past in April. I have never dared to upset my own two plants which live, therefore, in isolation. If you see it for sale, ignore the high-highish price and buy ten. They are extremely easy to grow well as long as you mark their site as they tend to vanish for part of the year. Give them leaf mould or the like. About 9 inches high they actually prefer to be in semi- or full shade.

Otherwise, where have our fashions led most to new plants? Hybrid Tea and other bush roses are unrecognisable of course; we have also rescued many old roses which I would suspect to have been on the way out, sometimes deservedly, by 1930. We have many more compact border plants, variations on those which needed staking. The big families have been well done by, the iris, the tree peony and the delphiniums: all the things, in fact, which cheer up the days between bad bets at Ascot and watching the British hopes be driven off the court in the first few sets at Wimbledon. The newer Oregon lilies, especially the large trumpet flowered lime greens and yellows are an exciting innovation, even if they are at times reluctant to open. Auriculas, true faced pinks and hybrid violets: are our losses along the way.

I believe that we look more than ever before to the family of hardy geraniums. They have become our first resort when we are faced with yet another dark town garden or a gloomy space just beneath the trees. The best are mostly at their peak now. Watching some of them I would like to put in a good word. The subtlest flower is to be found on one from the Caucasus which I and other friends treat carefully although catalogues often present it as if it were fussy and difficult. Perhaps this variety likes the light soil on which it grows wherever I see it doing well. There, it spreads quickly blocking out the weeds and making a bold edge of rounded rough green-grey leaves slightly cut at the edges. Its name is *Renardii* and it has become popular wherever there are weeds to be blocked out in the front of a flower-bed.

Attraction

The leaves, to my eye, have always been the attraction. They grow into a solid mound some 9 inches or so high but this year, the greyish white flowers marked with lines of slate-violet are abundant, perhaps because of the dry weather or because my plants have not been disturbed to give away more stock. The shape of each flower is neatly cut and unusual if a little ragged. Not a splash of colour but a good flower to contemplate in a sunny place as you wonder why it is better than a wild weed. Its shape contrasts splendidly with the upright clump of iris. Contrast and compactness are the virtues of a plant which seems to me to be very easily grown. I wait, meanwhile, in keen anticipation of the double violet blue flowers on the meadow cranesbill *pratensis flore pleno*, which is stocked by Bressingham Nursery, Diss, Norfolk. They also list a rare double white which I have never seen but imagine to be handsome. I am content with the dark double violet, as it lasts unusually well, beginning to flower in July and continuing for more than six weeks. If I had to choose two of these cranesbills for a limited garden, I would choose this old two-foot-high border plant which new fashions have made popular and the newer and admirable-looking *Buxton Blue*. The latter is no stranger here, even in gardening which we begin to show its blue and

white rounded flowers in late August and trailing usefully over a wide area until its leaves redden prettily in late October. Be warned that I have never found it easy to propagate. It makes a long forked tap-root and thus resists my attempts at division. Perhaps it should be taken from root cuttings, perhaps, sliced off in the spring when the plant is still negligible as its first leaves are about to appear. It dies back conveniently, because it leaves the right sort of space at the right time of year for a cover of crocus or spring bulbs.

Of the single blue geraniums I think the best value is to be had from *Johnson Blue*, after the gardener in Wales who did so much to improve this family for the garden. This variety lasts from June until August. Its violet mauve flower nearly allows me to call it bright blue and be truthful. Among the others I have yet to find a site too dark for *May-flowering* *Sylvaticum album*, a pretty white woodland geranium, which I prefer to the pale violet companion now sold as *Mayflower*. If only this hardy plant lasted further into the year it would be an excellent match for the invaluable *macrorrhizum*, the rampant plant which in its white or improved *Ingwersen's form* saves hours of bother in modern gardens where it spreads under shrubs or among shrub roses. It excludes weeds pleasantly. I like its scent and consider it essential in an age of gardening which cannot afford other people's labour.

I dare say that these and best small Alpine geraniums such as *Ballerina* were also on sale 50 years ago: the meadow cranesbill is an old and long grown garden plant. But an age which bred so many small-violets was not so thankful to have these plants on which to rely. The group I suggest would flower from May until October. They need no attention and save work wherever the strongest are planted. Perhaps they belong with modern conveniences like tinned food. But as my only two truly old roses are covered once again with mildew and have to be sprayed for the third time this year I am happy to believe that we take up fashions, even in gardening which we can best afford.

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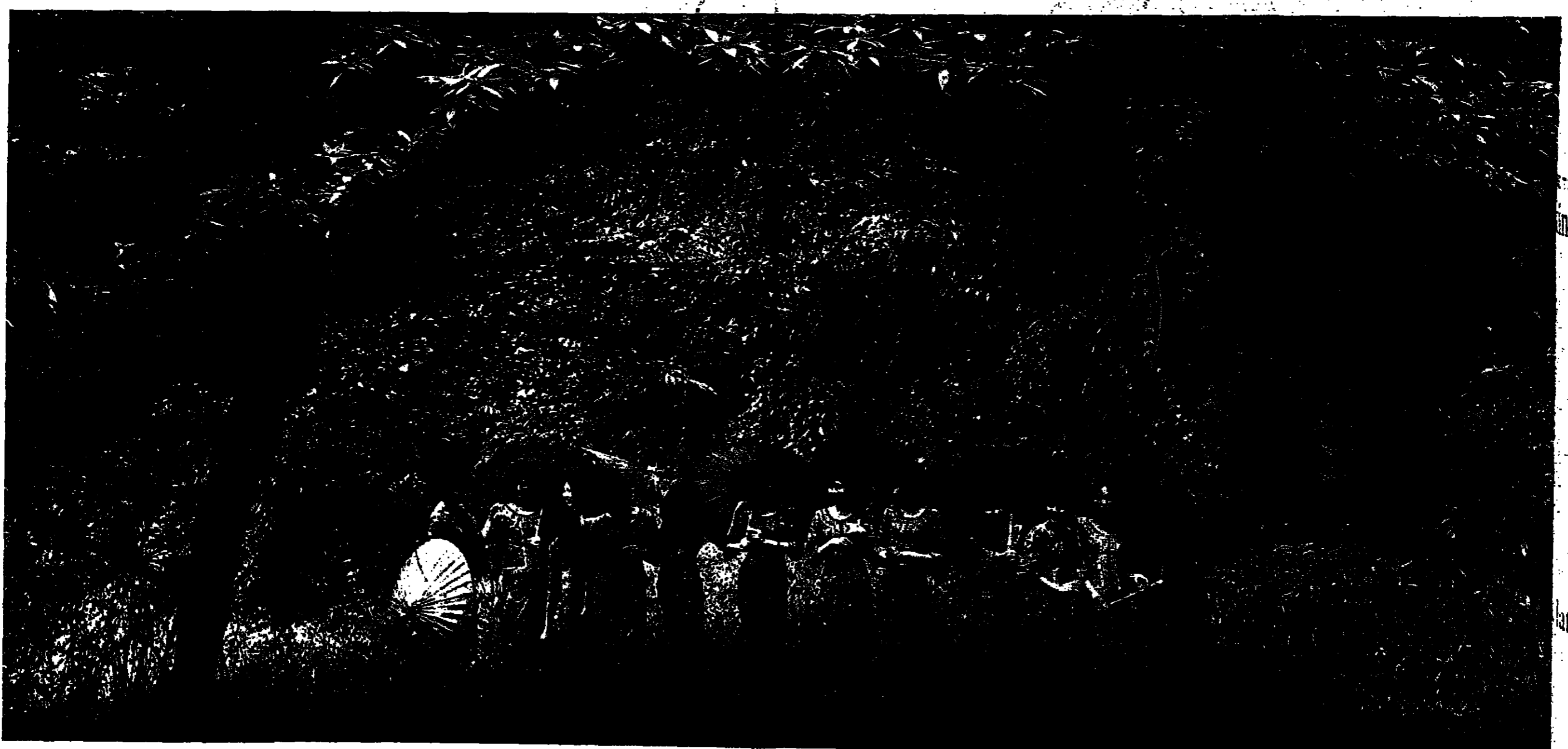
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Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

ENERGY Provides continuity

STANDBY OR no-break power supply equipment is being made and marketed by Thorn Automation under licence from C.T.S. of Canada. The range includes single and three phase static inverters, static switching equipment, ac to dc converters, and frequency choppers.

Available for ratings up to 300 kVA, the equipment is battery powered—size and life of the battery pack depends on the application. To minimize down-time the equipment is protected by high speed circuit breakers, and to provide maximum reliability and a large overload capacity the components are derated.

Energy use monitored

KENT Automation Systems, the computer control system specialist of the George Kent Group, is building a dual K90 computer controlled telemetry system for the British Steel Corporation development at Redcar.

RESEARCH Making the best of poor coal

COMMISSIONED BY British Columbia Hydro and Power Corp., Vancouver, Canada, and the Canadian Federal Department of Energy, Mines and Resources (EMR), a study contract has been placed with Coal Processing Consultants (CPC)—a partnership between the National Coal Board and Woodair/Duckham.

MACHINE TOOLS Marking metal

ETCHING PART numbers, code numbers, etc., on batches of small parts can be carried out with an automatic metal marking machine introduced by Lactro-etch (Great Britain).

Metric lathe

COMPLETING ITS range of metric centre lathes, T. S. Harrison and Sons has introduced the M500.

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REPROGRAPHICS Produces four full-scale prints for engineers per minute

WITH JUST over a year of de-termined marketing of the world's first A0 size engineering plan microfilm printer in a number of major industrial countries behind it, Intec is well on the way to disproving the cynical comment sometimes made about innovators that "it does not pay to be first."

COMPONENTS Precision control

INTENDED to take the place of mechanical cam-actuated switches, a programmable limit switch from Technation will eliminate all the problems encountered with its mechanical counterparts, or so the company indicates.

SERVICES Members on a database

SYSTEMS development and bureau services have been contracted for with the Association of Certified Accountants (ACA) and Systems Consultants of Edinburgh.

QUALITY CONTROL Resonance shows the faults

ENTERING a new field for the company, Instron has introduced an electromagnetic resonance machine to meet the need for high speed, fixed frequency, dynamic testing at loads to 300 kN (20 tons) and frequencies in the range 100-300 Hz.

SOFTWARE Cobol for a GEC machine

COMPUTING Department at North Staffordshire Polytechnic is to collaborate with GEC Computers to develop a Cobol compiler and run-time package for the GEC 4000 Series.

then, the unit has had two half-days down in 14 months' continuous working. During this time, usage has risen to about 500 prints a day with Plessey providing, for the time being, a reproduction service for outside firms.

TELEVISION Portable converter

A SIGNIFICANT achievement by a British company, Quantel, that already exports 90 per cent of its output, has been to reduce the size of television standards conversion equipment from two or more six foot equipment racks to a 12-inch high rack mounted cabinet.

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covers the electronic logic contained on one large printed circuit board. The equipment is not power-hungry and does not run hot, requiring only a 13 amp plug with 5 amp fuse.

More panels for solar heating

THREE NEW solar energy collectors, all suitable for mass production, will be on show to the public for the first time at an exhibition entitled "The Solar Household" in Welywn Garden City on July 1 and 2.

IMJ means more than metal

Imperial Metal Industries Limited is building products - Heat exchange, Fluid power, General engineering, Zip factories, Refined and wrought metals

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by "zooming" up the replay on an interesting part of the shot. Its principal application however will be in post-production editing because it enables producers to manipulate at will the size and proportion of pictures. It can zoom in on a segment of the original frame to give up to four times enlargement or can zoom out to produce slant proportions for special effects. It can also squeeze pictures from top/bottom or the sides.

By agreement between the Financial Times and the BBC, information from The Technical Page is available for use by the Corporation's External Services as source material for its overseas broadcasts.

This advertisement appears as a matter of record only
The equipment which uses similar digital techniques to the standard converter, will obviate the need to turn videotape into film and then produce these special effects optically, followed by another transfer back to videotape for broadcasting. Quantel is at Interface House, Croxson Road, Caterham, Surrey CR3 6OD (Caterham 4821).

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لبنان من الاموال

PARLIAMENT and POLITICS

Tory attack on price controls beaten off

Peers limit Minister's power to vary rebate

Sheldon promises study of wider tax exemption

Investment check Bill rejected by 15 votes

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

A TORY ATTEMPT to abolish the Price Commission by 1980 at the latest was defeated in the Commons last night after Mr. John Fraser, Minister of State for Prices, had told the House that the Government wants the new Commission and some form of price control to continue on a permanent basis.

Mr. Hattersley had only said that the present code should have a finite life. However, the Government did not see a permanent separation of identity of the Monopolies Commission from the work of the Price Commission. At some time in the future, it would like to encourage much closer working and unity between the two bodies. It was not possible to say at the moment how that would work out in detail.

ALTHOUGH SUPPORTED by Mr. John Pardo (L., North Cornwall), two early Tory challenges to different aspects of the new rules for taxing benefits in kind, introduced in the 1976 Finance Act, failed during further proceedings on the committee stage of the Finance Bill last night.

free accommodation in respect of expenditure on non-structural repairs, maintenance and decoration. Mr. Sheldon explained that the clause already provided a "long stop" restricting to 10 per cent of the emoluments of the employment the amount of tax which could be charged in respect of expenditure on repairs and maintenance.

Premier's 'better times' challenged by Tories

LOUD TORY derision greeted the Prime Minister yesterday, when he repeated to the Commons his weekend "better times are coming" message.

Speaking of his regret that left-wing amendments to the Bill had not been chosen for debate, he said: "I would have liked to see the Commission being able to freeze prices completely and make firms enter into planning agreements."

Provisional Sinn Fein step up call for British withdrawal

A STEPPING UP of the Provisional Sinn Fein's campaign of exerting pressure on Britain to withdraw from Ulster was announced yesterday in Dublin.

PM rules out banks takeovers

THE PRIME MINISTER to Commons yesterday that he had no intention of putting a Cabinet any proposals for nationalisation of banks insurance companies.

DAILY FLIGHTS TO NEW YORK. Now Iran Air have flights to New York every day of the week. All by Jumbo. Either our latest plane, the 747-200B; or the 747SP, the 'Special Performer'. All leaving Heathrow at 14.15.

Negotiators near to deal on U.S. flights - Callaghan

BRITAIN AND the U.S. are now near agreement on new arrangements for scheduled air services between the two countries, the Concordia landing rights in New York thoroughly disapproved by the President's "feigned disinterest".

Fraser hints at statutory safety standards in Bill

THE GOVERNMENT is considering giving British Standards statutory recognition in the Consumer Protection Bill, which comes before Parliament in the coming sessions.

THOMAS LOCKER (HOLDINGS) LTD. "ALL TIME RECORD" ... Mr J. R. Locker Chairman. Summary of Results: 1977 Sales 15,685, 1976 Sales 12,100.

HONGKONG (Selangor) RUBBER MR. ADDINSELL'S STATEMENT. The Sixty-fifth Annual General Meeting of Hongkong Rubber Limited was held on June 22 in London, Mr. J. Addinsell, the Chairman, presiding.

Planning law protection bid for showmen fails

AN ATTEMPT to give travelling showmen special protection under planning laws failed by one vote in the Lords yesterday.

Written Answers

TREASURY Mr. John Lee (Lab., Birmingham, Handsworth). What is the total number of civil servants engaged in the collection of EEC levies upon foodstuffs imported into the U.K.?

electrocomponents limited. Trading results for the year to 31st March 1977 (Subject to audit confirmation). 2nd Half year 1.10.76 to 31.3.77.

Minibus Bill unopposed

THE MINIBUS Bill would be of enormous value to great numbers of people, Baroness Young, Conservative environment spokesman, told the Lords yesterday.

Pensions statement promised

THE GOVERNMENT is planning to make a statement "in the not too distant future" on plans to give trade unions half the trustee positions in occupational pension schemes.

The Management Page

EDITED BY CHRISTOPHER LORENZ

Seagram has not become disenchanted with the U.K. despite a bad trading year.

Exporting as the answer to a problem

BY KENNETH GOODING

IT WAS an unforgettable Press conference. Ostinately the objective was for Mr. Edgar M. Bronfman, chairman of the Seagram Company, to announce a £30m expansion programme in the U.K. But a few weeks earlier he and his former wife had been locked in a legal tussle in the English courts. So at the Press conference the questions about Mr. Bronfman's private life while the rest of us were trying to find out more about Seagram's financial aims. But in the resulting media one remark came through loud and clear. In justification of the investment plans, Mr. Bronfman said: "As the world's largest group in the drinks business we are not big enough in Britain."

Unfortunately for Mr. Bronfman, his timing could not have been worse. Less than four months later—in April 1976—Seagram announced an indefinite postponement of the investment scheme "because of the economic climate and the general uncertainty of the future in Britain."

Since that time Seagram has slimmed down its sales in the U.K. subsidiary, operations substantially. The work-force has been cut by nearly 11 per cent, companies closed down and brands discarded.

So is Seagram, after all, totally disenchanted with the U.K. market? "No," says Mr. Roger Lamberth, who took over as managing director of the U.K. Seagram company in December 1974 and who recently also became chairman. "In the long term there can be good profit potential."

The rationalisation of the U.K. sales operations has already cut annual losses from around £1m to the break-even level at a time when the drinks business is not exactly bubbling.

Two years ago the company was all-gunned up for a major expansion in the U.K. market. It had three sales companies actively competing against one another with hundreds of brands between them. But the Chancellor of the Exchequer stamped most of the volume growth out of U.K. sales of wines and spirits, and at the same time the Price Code made it impossible for companies to take evasive action by improving profit margins.

At Seagram, therefore, there had to be what Mr. Lamberth admits was "some tough surgery." The three sales companies were merged, head office functions were eliminated and staffs streamlined. That cut out 280 jobs (including 135 redundancies), leaving Seagram with 2,300 employed in the U.K.

A brand new £1.5m computer controlled distribution depot was set up at Dunstable, which turned out to be "a gigantic white elephant," was also closed. Seagram switched the distribution of its products to outside contractors, a move which is currently saving about half of what it would have cost with the depot still in use. The company hopes it has now found a



Three major products in Seagram's slimmed-down range against a background of the Strathgairn Distillery in Banffshire, claimed to be the oldest operating malt distillery in the Highlands.

buyer for the Dunstable operation. Mr. Lamberth confesses that Seagram had previously been "confused about its role." On the wine side it could not make up its mind about whether it should be a shipper of Seagram wines from Europe—the group has major wine interests in all the main producing countries—or should sell other people's.

Swept out

So, while the companies were being merged, every single non-Seagram-owned product was swept out of the portfolio. "The savings were colossal and the market penetration after the immediate set-back has not suffered," claims Mr. Lamberth. Some Seagram brands which have no relevance in the U.K. because there is no demand for products of their style were also dropped. They included Boodle's gin, a premium gin which does well in the States, and Benchmark bourbon, another premium-priced product. Where there was duplication of brands Seagram dropped most of them. For example, it had three of its own vodkas: two were dropped and the company now concentrates on the Orloff brand. A similar situation in white-rums

resulted in two being dropped in favour of Tropicana. All these changes allowed Seagram to redirect funds originally destined for the development of the U.K. trade towards its export efforts. The wine side is now almost entirely export-oriented with the main emphasis, of course, on Scotch whisky.

It now has the second-largest whisky stocks in Scotland valued at £70m, in its own balance sheet and by 1980 is committed to buying another £30m worth. This is being stocked on its behalf by a bank-backed trading company.

In the U.S., the prime whisky export market, its two major brands, Chivas Regal at the premium end of the market, and Passport, both bucked the general trend last year and improved sales.

By this switch in emphasis to export, Seagram Distillers' profit before tax (and before exchange profits or losses) is on target for £15m in the financial year, compared with the £8m for the year to last July 31.

Now that U.K. overheads are at a reasonable level, Mr. Lamberth says the next step is to start building again in this country. "My declared intention is to get a better market

penetration. But we won't buy volume at the expense of profit."

At present Seagram's major brand is Captain Morgan rum and a major part of the brand's sales go through the grocery and cash-and-carry trade. The grip the brewers have on the pub trade makes it difficult to break into that sector.

Seagram is currently looking to see which of its other brands have the potential for volume growth. Apart from Captain Morgan, its Burnett's White Satin gin has an 8 per cent market share and is nearing a five million a year sales level. It also is studying what might be done in the standard-brand Scotch whisky area (the U.K. is rationed to 40,000 cases of Chivas which sells at £30 a case compared with £9 a case for standard whiskies, duty free).

Mr. Lamberth can also see that there might be some opportunities to develop Seagram's branded wines.

"But the main problem, as he says, is the unrealistically low prices being charged by the drinks producers and distributors in the U.K. "There is great long-term potential in the U.K," he insists. "Sooner or later there must be more realistic pricing in this market. I am sure prices will move up steadily. But they have a long way to go."



A farewell to tariffs

BY DAVID BUCHAN

FOR FREE traders, July 1 is a red letter day. It sees the last remaining industrial tariffs come down between the U.K., Ireland, and Denmark and the six original EEC states. At the same time the new member states lose to the Brussels Commission the right to take independent tariff action against dumping.

That date is also the one on which most industrial tariffs disappear between the nine and the seven member states of the European Free Trade Association. This development is not coincidental. The departure from EFTA of its biggest member, the U.K., made it necessary for the remaining EFTA member states to negotiate new trade agreements with the European Community, and the end of the transition periods for these agreements was designed to dovetail with the final tariff integration of the U.K. into the EEC.

The tariff protection that Brussels will continue to impose on certain sensitive industrial products from EFTA countries is not unimportant. These products include Austrian and Swedish steel in particular, and special steels, pulp and paper in general. But the start of next month will see the consolidation of a single EEC market of 250m people, and a big step towards a free trading area with over 300m people.

At least that is the theory. The Brussels Commission is less than happy with the functioning in practice of its single market. And it considers this an opportune moment to turn the political spotlight on the problem. It is sending to the Council of Ministers and to the European Parliament a detailed document on what it sees as the serious flaws in the working of the customs union.

The importance of the customs union to the community is incontestable. The common external tariff (CET) is the face that the EEC presents to the outside world, and it is what distinguishes it from any other international economic grouping. The customs union is what makes preferences worth getting for developing countries, and is what gives the Community its clout in trade negotiations, whether with Japan or in GATT or wherever. To the European businessman or consumer it is also the most practical symbol of the EEC, as well as being the basis for EEC agricultural and industrial policies.

This was how Viscount Etienne d'Avignon, the EEC Commissioner responsible for industry and the internal market, prefaced his announcement on June 10 that the Commission is starting a major effort to simplify all the legal and administrative rigmarole that still exists at the Com-

munity's internal frontiers, even though there are few or no customs duties left to levy. In the longer term, Viscount d'Avignon said, the Commission is aiming at a uniform community customs code, with set procedures and uniform sanctions for breaking them.

While the Commission acknowledges that the day of uniform VAT and excise duty rates throughout the community is far off, and that therefore some internal frontier checks may be necessary in this field, it is suggesting that many other checks are unnecessary, such as in textiles, make it Health and police controls, for instance, might be reduced by only taking samples of cross-frontier traffic. Nor does the Commission feel that trade statistics must be gathered at the frontiers: indeed Viscount d'Avignon suggested that member states might leave this job to the Commission. The growing number of industries on whose behalf the Brussels Commission negotiates intercommunity agreements, such as in textiles, make it necessary for Brussels to have these figures in any case.

Complexity

Then there is the complexity of the CET itself. When it was first adopted in 1960, the CET had the effect of cutting down some 20,000 different tariff positions of the original six member states to 3,000. But with the development of the Common Agricultural Policy and the growth of preferential agreements with third countries, tariff headings have started to proliferate again. To-day there are 3,700 community tariff positions. The Viscount declared that he himself would be incapable of dealing with the task that all this presents to the average EEC customs official. A number 300 now. Officials say that about 80 per cent of these cases are probably errors of omission, but one additional factor is where a member state has not had the time to change its laws in accordance with a directive, extra care must be taken to see that "rules of origin" procedure is not relaxed. It is a relatively small number of these rules that prevent outside cases does there appear to be countries slipping under the wilful obstruction.

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BUSINESS PROBLEMS BY OUR LEGAL STAFF

Balance sheets and accountants

I am self employed and compile my own tax returns and VAT forms. My local VAT officer now demands that I provide a balance sheet audited by accountants. Must I?

The statutory authority for demanding production of a balance sheet is to be found in subsections 2 and 4 of section 35 of the Finance Act 1972:

(2) Every person who is concerned (in whatever capacity) in the supply of goods in the course of a business or to whom such a supply is made shall—
(a) furnish to the Com-

missioners, within such time and in such form as they may require, such information relating to the goods or to the supply as the Commissioners may specify, and
(b) upon demand made by an authorised person, produce or cause to be produced any documents relating to the goods or to the supply for inspection by the authorised person and permit him to take copies of or to make extracts from them or to remove them at a reasonable time and for a reasonable period.

(4) For the purposes of this section, the documents relating to the supply of goods, or to the consideration for the supply of services, in the course of a business shall be taken to include any profit and loss account and balance sheet relating to that business.

On the question of engaging an accountant, perhaps we may quote paragraph 16 of the free Inland Revenue booklet IR28, "Starting in Business," which is obtainable from most tax inspectors' offices:

16. Whether to engage an accountant is something you are free to decide for yourself. It is not essential, but it is an advantage to have a qualified professional accountant to advise you on day-to-day book-keeping, payment of National Insurance contributions, Value Added Tax, the operation of PAYE, and financial matters generally as well as to audit your books, draw up your accounts, and agree with the Inspector of Taxes the amount of your taxable profit.

among its members) in whose names the shares can be registered. However, as long as there is no corporate entity, it is essential that some person or persons or company should hold the shares as trustee or nominee for the syndicate.

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible.

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Books as plant

I see that early this year the Court of Appeal ruled that books bought by a barrister for his professional work should come within the meaning of the word "plant" in so far as used as tools of his trade. Do you think this ruling could apply for tax purposes to a clerk's books? We see no reason why an attempt should not be made to obtain the same allowance for books as "plant" for clerks' books as has now been held to apply for barristers.

Shares held for syndicate

An association, named the X syndicate, with 32 members, some minors, holds shares registered in the name of a stockbroker's nominee company. This company has now started to make charges and, to avoid these, we would like to buy shares in the name of the syndicate. Is this possible and, if not, have you any suggestions? If the syndicate has a legal entity it would be possible to dispense with the nominee. However, that is unlikely, as it would require the syndicate to have been incorporated as a company, which appears not to be the case. There is the alternative of appointing trustees of the syndicate (for example from

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WEDNESDAY, JUNE 22, 1977

Unemployment jumps

THE MOST OBVIOUSLY reversed in June does at least striking feature of the latest unemployment figures is the sharp rise in the number of unemployed school leavers:

The more serious feature of the latest figures, however, emerges when school leavers are left out of the total as a special factor and account is taken of normal seasonal variations in the monthly returns.

Now, quite suddenly, the picture has become much more plausible. Unemployment, seasonally corrected, is reported to have jumped by no less than 35,000 between May and June.

Using Comecon's resources

THE COMECON countries have some justification for claiming to have staved off the worst effects of the world economic crisis. Their growth rates have been a steady five to six per cent. for several years, and their technological progress unmistakable.

The raw materials and energy situation has become particularly acute because of the Soviet Union's inability to open up new sources of supply fast enough, notably for fuels, minerals and timber most of which have to be obtained from distant and difficult regions like Siberia.

These contributions placed a heavy burden on the East European countries. But at the same time the Russians gave notice that the price charged for those materials would gradually be brought up to world levels.

Chancellor Schmidt's rule by cliff hanger

BY JONATHAN CARR, Bonn Correspondent

BONN nowadays eerily reminds some old hands of the days before Dr. Ludwig Erhard's resignation as Chancellor in 1966. A Head of Government is once again out of favour with forces in his own party which could bring him down.

As it is, the tax measures must now go to the Bundestag, the second chamber grouping representatives of the Governments of the Laender, the federal States. Here the opposition has a majority. It even is in coalition with the FDP in two States.

The longer this division persists, the greater the danger that the left wing will decide that there is no place for it in the SPD and departs, carrying with it other unhappy deputies who a year or two ago would never have dreamed of such a step.

So it proved. The left wing of the SPD has long felt that the coalitions' junior partner, the liberal Free Democrat Party (FDP) has too big a say in government. Now it was asking the SPD to agree to a cut in property tax—a measure which the Left believed simply handed a DM1.5bn. (€380m.) gift to the 0.9 per cent. wealthiest members of the population.

The SPD leadership was ready to put up with this to prise other tax measures out of the FDP. But for five SPD deputies it proved too much to swallow. Three voted against

and two abstained. Had all five voted against, the coalition's majority of 10 would have vanished and the tax package would have failed. In that case several key members of the FDP were determined to press for breaking the coalition.

It would thus be wrong to imagine that the Government is in trouble just because it has a slim majority and a handful of left wingers who can sway the balance. The whole parliamentary party is increasingly disinclined to act as a rubber stamp even for hard-won coalition compromise proposals which really seem to be the best the two parties can manage to produce together.

The first warning came right at the start of the new legislative term in 1976 when the Government produced proposals on pensions apparently cutting clean across election pledges given a few months earlier.

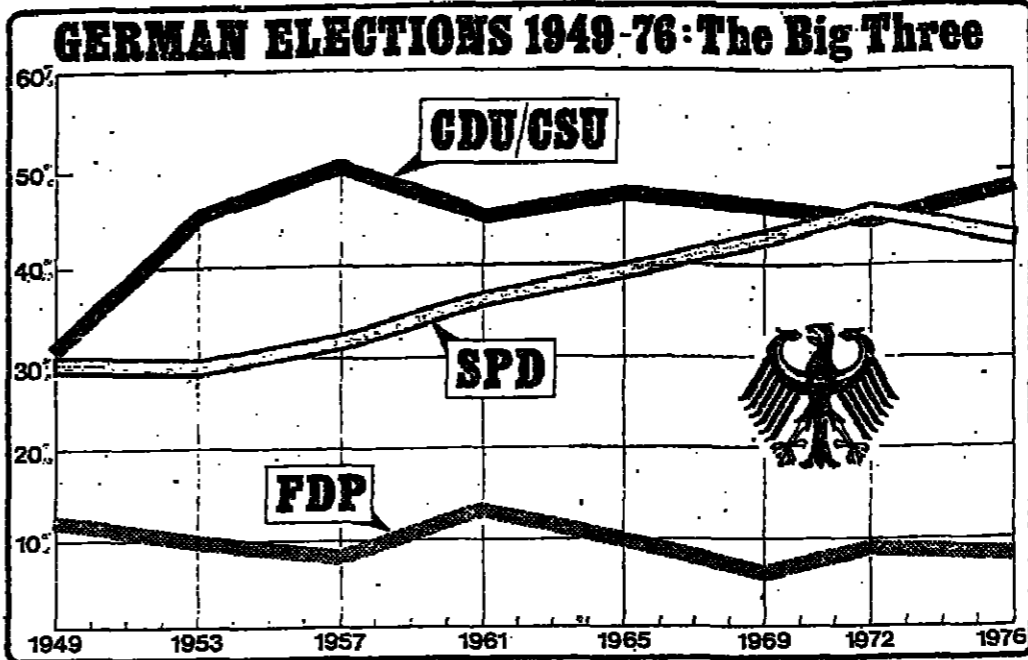


Table titled 'THE ALSO-RANS OF THE ELECTIONS' showing the percentage of total votes obtained by splinter groups (NPD, Communists, Others) from 1949 to 1976.

dragged to preserve the coalition. Temporally he is poles apart both from Herr Schmidt and from the powerful, irascible leader of the SPD parliamentary group, Herr Herbert Wehner.

But there is a strong element of personal frustration involved too. Herr Strauss's career in Bonn began at the foundation of the Federal Republic itself in 1949, and he has been outstandingly successful in his Bavarian home state.

Now it is widely felt that Herr Strauss is only waiting for the right moment to take his CDU out of the alliance and align it with a new country-wide party. His talks with the new SDU fall into this context. What does he stand to gain?

To no one's surprise it has emerged that leaders of the new group had talks earlier this month with Herr Franz Josef Strauss, head of the CDU's sister party, the CSU, which operates only in Bavaria.

At Owen's suggestion, much of yesterday's EEC foreign council meeting in Luxembourg was restricted to ministers and a few top advisers. Owen thought it better to keep the conference room clear of great hordes of officials whose mutterings might only impede serious talk.

Most of us care a lot for the contents and little for the label when it comes to consuming wine, particularly if it is of the quality of the famed Chateau Mouton Rothschild.

alliance, even under circumstances. It is plain enough that developments are taking. It is less easy to say why. Insist that the two parties have become too

One cabinet minister recently there was too talk, too little decision, a fully spoke of the days, autocratic Chancellor, Dr. Adenauer, when this done. But it is d whether the appear another Dr. Adenauer make much difference.

This feeling of a lack of trial goes beyond foreign where the Government clear case for saying it possibilities are limited covers all the eec and in particular the unemployment, still stand little under 1m., and the average close to that f year as a whole

The Government coddled its brains on reduce unemployment, least has had the sense adopt the more foolish a proposed. The opposi produced plans promptly harshly criticised from its own ranks. Industry is to invest to produce more—but instead invests pr to rationalise, not to the public increasingly i that neither side has an and that high unemploy probably continue to come.

One possibility would be to that. But it is little if-people become more-able to arguments from extremes—not from the munitists or the NPD, w Herr Strauss make off, quite possibly with a clutch of CDU right wingers. In the centre of both these two big parties there are moderate men who can work together well enough. Last year, for example, it was often rather unkindly said that Herr Schmidt was the best CDU Chancellor whom the SPD possessed. On the other hand, the experience of the 1960s, and creation of an extra-parliamentary opposition, makes many reasonable men hesitate to try to repeat an SPD-CDU themselves.

MEN AND MATTERS

Much perturbation in Peterborough yesterday. Somebody wanted to give a company away, claiming it to be a successful one except that it suffered from the familiar problem of too much red tape.

Over a box number, the local evening newspaper carried an advertisement from an anonymous businessman who said he had spent the last 15 years building up his firm but he was now exasperated with the mountains of paper work which had been thrust on him by the Government.

Clues to the identity of the company were few: the advertiser claimed it was a leader in its field with no debts, a new factory, and the best staff in the world. Newspapers traditionally guard their box numbers zealously, and the name of the frustrated industrialist was also

the place, and the ministers insisted on slipping away to brief the Press.

Pity, then, that the proceedings soon bogged down in a bizarre dispute about nomenclature. Why has the British delegation at the current review of the Helsinki agreement in Belgrade failed to display a nameplate identifying the U.K. as acting president of the EEC?

being kept well under wraps last night, though his bona fides seemed in no doubt. And doing a spot check of likely possibilities was not an easy exercise, either, local observers pointing out that Peterborough boasts well over 100 small firms which have arrived relatively recently in the district.

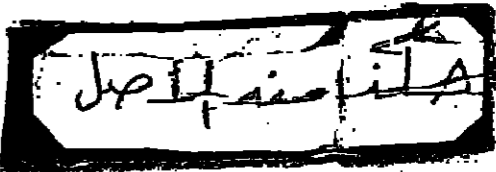
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Observer



European Vehicle Components

The motor components industry is developing on a truly European basis. While rationalisation is slowing down, there is an increasing overseas effort, particularly in the U.S., where European groups are beginning to supply more and more local manufacturers.

ONE OF the most striking examples of the development of a truly European market since the formation of the EEC lies in the motor industry. All of the largest countries within the group have national car and truck industries which, until about ten years ago, effectively kept foreign imports at bay. To-day it is an accepted fact that these nations will take care imports of anything between 20 and 35 per cent., with Britain going up to 45 per cent. because of the large numbers of imported vehicles from Japan.

The result of this flow of new cars across national boundaries has been to create more overseas markets for the national component companies. Suppliers to the big vehicle groups have seized the opportunity of following them abroad to serve their needs in the replacement market. From this has developed more overseas manufacturing facilities, the creation of new international distribution systems—often through acquisition—and the growth of larger component groups with the financial muscle to operate on an international scale.

At the same time, the motor manufacturers themselves have been encouraging a more international system of supply. One of the reasons for this is the feeling that, where possible, it is wise to have alternative sources of supply for the main vehicle components. This gives greater cushion against international disruption and transport problems, along with more leverage on prices. The second

reason is the buying opportunities created by the rapid readjustments which have occurred in European currency rates in the past ten years. These have encouraged buyers to go further afield for components, Britain in particular, having gained from this move because of its low wage economy and competitive exchange rates.

The two most obvious protagonists of change among component companies in this period have been British and American companies, who have developed overseas for rather different reasons. On the one hand the British companies have been well placed to adopt an international posture because they have tended to have greater independence from the component manufacturers compared with their Continental counterparts. This freedom, combined with the troubles of the U.K. vehicle manufacturing sector in the last ten years, has given them every reason to search out new markets.

By contrast, the U.S.-based concerns have come to Europe as part of the worldwide multi-national drive which got underway in the mid-1960s. Europe at that time was seen as a significant growth market compared with North America where new car sales were flattening out.

Rationalisation

Under pressure on these two fronts, the European component industry has come in for substantial rationalisation right across the board. Two large electrical and electronics

companies have developed in variety of businesses in building Lucas of the U.K. and Bosch of Germany; clutch manufacturing components groups in the last decade, under its wing, among others, are Teves, the German brake company, Koni, the Dutch shock absorber specialist and a diverse handful of Italian companies. ITW, another American multinational, has spread its net widely in the U.K., whereas Eaton has stayed close to its own U.S. base business in axles and transmissions.

The question now is how much further these moves towards European integration can go. There is no doubt that in the past two or three years the acquisition fever in the industry has died down, partly, perhaps, for tactical reasons, but partly because there have not been so many suitable companies up for sale. Most of the medium-size concerns in the industry are now part of larger groups. This leaves only smaller operations which either do not interest the major companies or are too firmly entrenched under family management to want to change.

At the same time, the GKN bid for Fichtel and Sachs, which the British company has had to fight through the German Courts against monopoly legislation, has shown that official opposition is hardening against the establishment of potentially monopolistic organisations. This implies that there will be

component manufacturers to open new plants there. Cibié, the French lighting equipment producer, has a large plant in Southern Spain, and both Armstrong Equipment and Estou have recently made new investments.

The other untapped area for European producers lies in the and with the hope of winning further penetration from the planned new Volkswagen Golf in America.

In addition, Associated Engineering has recently established a warehouse in Baltimore and is backing this up with a big sales drive led by Europeans seconded to the U.S. The idea is to build on the present £2m turnover by going for specialised sectors, such as diesel engine parts: AE's Brico subsidiary has already won important contracts with small engine manufacturers such as McCulloch and Tecumseh.

The spur to development in the U.S. is twofold. On the one hand, American cars are growing smaller, and as they do so there are opportunities for European-type technology. Recently, for example, Hardy Spicer, the GKN subsidiary, won a large £12m. a year direct export order from Chrysler U.S. for its transaxle system designed for front-wheel drive cars. At the same time, the growing interest of U.S. companies in diesel engines as a means of saving fuel in the that at least two of these companies will soon have established local manufacturing facilities—indeed Bosch now has a 10 per cent. stake in Borg Warner, the U.S. automatic transmissions manufacturer.

Lower down the scale in size, Alfred Teves, the Frankfurt-based brake manufacturer, has already started to put money into the U.S. Last week it opened a new facility at Culpeper, Virginia, with the backing of an order from Ford U.S. and a number are beginning to

Opportunities

Other component manufacturers are also becoming involved in retailing through fast-fit repair centres. Tenneco-Walker, the U.S. multinational which now owns Harmo, the U.K. exhaust manufacturer, and a chain of other producers including a German operation, has now bought the Pit Stop organisation; and ITT has been setting up a similar chain, fitting brakes and shock absorbers as well, on the Continent. The effect of these moves will be to create larger, more diversified, and more internationalised companies. As they expand, it is also clear that they will be drawing together the technology base of the industry in Europe and the U.S. Component companies are being created, therefore, which measure up to the trans-Continental methods and demands of the vehicle manufacturers they serve.

This means that component importing and exporting, just as the design of cars, will become more international in its shape in future. For the component companies one of the surest ways of ensuring survival will be to manufacture on this scale, keeping the option of supply sources open, and avoiding commitment to one vehicle assembler, or national market, or product.

A growing integration

By Terry Dodsworth, Motor Industry Correspondent

significant presence by Bendix, a U.S. company, in specialised truck parts, such as axles and transmissions, a number of U.S. companies—Eaton, Dana and Rockwell—have made their mark; Associated Engineering claims to be one of the world's largest manufacturers of precision engine parts, and in brake parts Ferodo, the U.K. company which has links with the French Ferodo concern, has established a strong position.

There has scarcely been any common strategy, however, behind this rationalisation into larger groups. On the one hand GKN in the engineering sector has stayed fairly close to the concept of "metal working" in its acquisition policy; on the other hand, ITT, the U.S. conglomerate, has picked up a

moves towards more natural, national growth in the future. Indeed, this seems to have been happening even before the Fichtel and Sachs case: American companies have not been so keen of late to invest in new equity in Europe because of rising wage costs, and many of the indigenous companies have now established the overseas bases they were looking for in the first place.

The best prospects for future growth lie in the few markets where European components are still not in great use. Spain, for example, remains a relatively undeveloped market in European terms—its car ownership is about half that of the rest of Europe—but it is growing fast enough to tempt many com-

U.S. There is no doubt of the seriousness with which the possibilities over the Atlantic are now being taken. The three biggest European manufacturers—Bosch, Lucas and GKN—are all making very strong sales drives in North America, and it is confidently expected that at least two of these companies will soon have established local manufacturing facilities—indeed Bosch now has a 10 per cent. stake in Borg Warner, the U.S. automatic transmissions manufacturer.

Lower down the scale in size, Alfred Teves, the Frankfurt-based brake manufacturer, has already started to put money into the U.S. Last week it opened a new facility at Culpeper, Virginia, with the backing of an order from Ford U.S. and a number are beginning to

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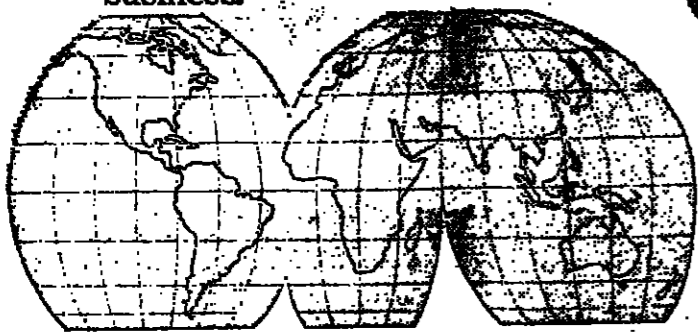
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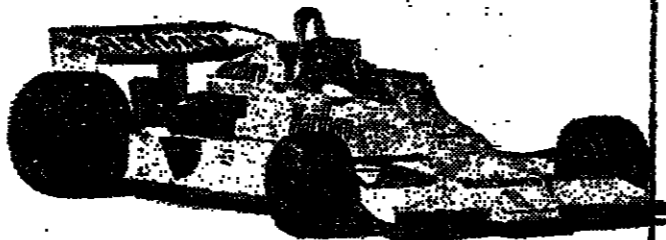
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EUROPEAN VEHICLE COMPONENTS II

Electronic methods spreading fast

ELECTRONICS HAVE been appearing in trucks before cars, slow starter in the motoring field, perhaps because of an inbuilt resistance to change which has kept the motor-car so conservative in design for the 90 or so years of its life.

We are still using the same kind of engines driven by the same fuel through the same sort of transmission that we used in the days of the horseless carriage, perhaps because too many people make a living out of keeping things as they are. Steam and electricity have never made much headway; nor the various alternative kinds of engine like the Wankel, Stirling and others.

Yet electronics now have crept in to be used in half-a-dozen ways in the car and truck engine and other parts of vehicle equipment, leading towards the day when a micro-computer will feed the engine its diet and control its functions. Electronics have in some cases taken over from the old ignition set-up with coil and contact breaker, and there are at least eight different makes of electronic ignition kit on the market. They are also used in fuel injection to replace the carburettor, so that the two main diet items of an engine—fuel and spark—come from this new source.

Circuits

In addition we have fibre optics which enable a large number of electrical circuits to be run in one fine wire, rather like the coaxial cable which can carry many telephone circuits. This was featured on some recent Jaguar models. There are also two one-wire systems carrying all the wiring functions of the vehicle through one wire, one system made by Lucas and one by Smiths Industries. Lucas calls it a Ring Main, which is Multi-plexing to the Americans, and Smiths uses the name Ecstasy (Electronic Control for Switching and Telemetering). Automobile Systems). Both are likely to

appear in trucks before cars, anti-lock brake systems, which is in the field of safety, as one could also say, is the reduced exhaust pollution made possible by electronically controlled fuel supply and ignition. Yet another is in the operation of the speedometer without a mechanical drive, as in the new Rolls-Royce Silver Shadow II and some new BMW models, which eliminates the noise and other problems like broken cables and cable wind-up.

Lucas pioneered electronic ignition in Formula 1 racing cars back in the 1960s, and in 1971 the system was also fitted to the production Jaguar V12. The Leyland TR7 sports car also used the first totally self-contained electronic distributor outside the U.S. More recently this design was launched on the aftermarket and is now available to fit 13 popular British cars, with plans to extend the range. These may now be dropped as Lucas are abandoning the Opus oscillating pick-up system in favour of a magnetic (variable reluctance) system to trigger the spark.

The new system developed by Lucas will be more rugged and cheaper than the discrete components and electronic modules, which are costly and difficult to assemble. The new system uses the latest technology in integrated circuit and thick film design, which is also more compact.

Ignition

Lucas will then rationalise its electronic ignition range, as the four, six, eight and 12-cylinder systems, although basically similar, now use different methods of construction for the incorporation of the electronic module. In the magnetic variable reluctance system the pick-up module is sufficiently compact to fit within the conventional distributor body, even the smallest in the Lucas range, considered an essential design parameter. But unlike Opus—the original racing car design—the power amplifier is separately housed and sited remotely from the distributor. This facilitates efficient cooling of the circuitry and gives better servicing access.

Rolls-Royce, the new Rover 3500 and Triumph's TR 7 all use electronic ignition. Lucas also market a Bosch-designed electronic fuel injection system, also first used in racing. Cars first used mechanical Bosch systems before electronics arrived, but a digitally-controlled electronic fuel injection system will be with us within a year. Digital control makes possible a degree of sophistication which cannot be achieved satisfactorily using analogue techniques, and the closer matching of fuel requirements obtained with the

Legislation

A refinement will be evinced in the quality of exhaust gas by a sensor which will feed back a signal to a computer, giving a reading of the oxygen in the exhaust and the fuel flow will be further corrected by the computer in a closed-loop system to meet emission legislation.

Bosch, which continues to make its own systems, has teamed with the D Jetronic which transistorised and computerised then the K Jetronic which part-mechanical, and now the Jetronic, which is a combination of the other two. Another application of electronics so far mentioned is in diagnosis where coupling up of leads with crocodile clips give readings of distributor dwell angles, rpm, advance, charging circuits and on. A refinement of this is plug-in system which enable the mechanic to read off the various figures on a wheel apparatus which is simply plugged in to a ready-wired spot on the vehicle. The Germans lead in this field (VW, BMW, Porsche, Mercedes) critics say this method does not monitor engine/vehicle functions and is of limited comparison with the full of electronic testing machines of Crompton, Sun and others.

It will obviously be some time before the micro-computer controlling the fuel diet of the engine, for example, but the electronic techniques are spreading in the luxury car class and will move down the scale as production methods make the cheaper. In the early days motor racing (back in the 1960s) the new ignition systems were not too reliable, but it has been ironed out now as the new magic methods show to be just as dependable as the old bang-and-bounce pot which work so well until the spring breaks, the fibre wears down or arcing bridged the gap.

Filing and gapping the pot should soon be a thing of the past except on older cars which will probably be ban unless they conform to clean exhaust laws anyway.

George Bish

Saving on fuel

WEIGHT SAVING has become by far the most crucial aspect of car design in America today. In Europe, it is not such a pressing factor, it only because Governments have not legislated, as in the U.S., for companies to achieve much higher levels of miles per gallon from their car fleets. But the pressure is nevertheless being applied: as fuel prices soar, so does the need for greater running economy—and the most direct way of achieving economy is through saving weight.

There are four major ways in which car manufacturers hope to achieve these ambitions—by introducing new and lighter materials into the construction of the car; by miniaturisation of components; by better aerodynamics styling; and by reducing the friction built up between the tyres and the road surface.

The application of new materials in car construction is already well advanced, with aluminium and plastics now in wide use. But in future, these materials can be expected to be applied in much greater amounts and over the whole range of vehicles, not just the more exotic models which have been able to use these products because price is not such a key element in their marketing.

Ford U.S., for example, expects to be using 6 per cent aluminium in one of its average cars by 1981 against 3 per cent today, and 7 per cent plastics against 4 per cent. Use of these two metals has gone up respectively from 2 per cent and 3 per cent since 1973. At the same time the company believes that it will be able to reduce the weight of the glass in its vehicles, and cut the use of steel from 63 per cent to-day (against 67 per cent four years ago), to 58 per cent.

The problem with using aluminium is that it is a more expensive metal than steel or cast iron, and, for some purposes, not as malleable. The technique of making aluminium lighter than the standards required by the motor industry, for instance, has not proved easy to learn. But despite these drawbacks, it is gradually being

adapted for some sheet metal purposes, such as boot and bonnet lids, and is expected to be introduced in the future for outer door panels as well. Rolls-Royce, for example, which makes one of the heaviest cars in the world, already uses limited amounts of aluminium in this way to cut down weight.

Aluminium is also coming in for increasing use in some of the larger components. The two most striking examples are engine blocks—where aluminium is now used universally by Renault—and wheels, a field where GKN has developed a successful manufacturing technique. Not all manufacturers are convinced that all-aluminium is the right way to go in engine blocks, partly because of cost, and partly because, particularly in the U.S., lightweight iron castings are being developed. But aluminium cylinder heads are coming into greater and greater use.

Plastics

Plastics have already become ubiquitous in the interior of the average car, either for seating, cushions, trim materials, steering wheels and fascias, or heater components and batteries. For styling purposes, designers have found plastics easier to shape, while the moulding techniques by which they are made have the added virtue of being easy to adapt to mass production techniques, as well as being generally lighter than the wood they replaced. The next step will be to use plastics for panel work—Renault has made a start on this with its new moulded bumpers, which on one of its R5 models has been expanded as a kind of skirt around the vehicle. By 1985 many cars may have door panels and roofs made from plastic.

Steel itself, by far the most important metal within a car, is undergoing a change. New configurations of sheet steel are being developed for the motor manufacturers which will be of thinner gauge and lighter than the average sheet steel of today.

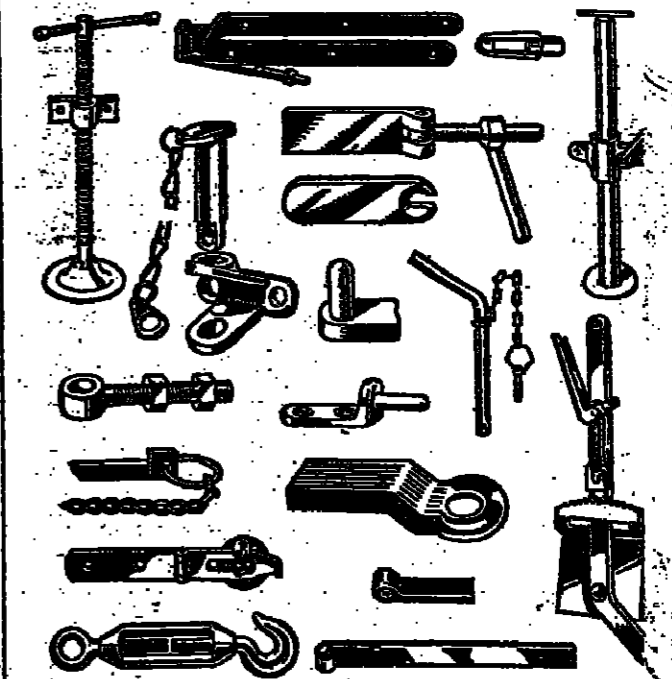
In the U.S., Chrysler has developed a new steel known as ding-no-no which is claimed to

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EUROPEAN VEHICLE COMPONENTS III

Major drive for overseas sales

THE KEYSTONE of the big European component companies' growth strategy in the past decade has been overseas sales. Primarily, this has been a move led by the British groups, which have seen the best prospects of expansion in markets outside the U.K. because of the stagnation in domestic sales. But the lead has also been followed by some of the Continental companies, prompted by the success of their indigenous vehicle assemblers overseas.

This drive overseas has been directed towards three major fronts. First, there has been the traditional Commonwealth and Third World markets, where component business has tended to follow the lead of the car and truck exporting activity. In Iran, for example, both Lucas and GKN have set up shop in the wake of the large contract won by the Rootes Group — now Chrysler — for its Hillman Hunter model. Similarly in Brazil, Alfred Teves, the West German brake company, has established itself alongside Volkswagen.

The second area of growth has been within Europe itself. Prompted by the declining tariff barriers of the EEC, there has been a vast increase in the interflow of components across national boundaries in the past decade. The vehicle manufacturing groups like Ford have established international buying organisations which scour the whole of Europe for the best deals, and which have generally tried to secure two different European sources for their most important component supplies. In those cases where it has been difficult, either for technical or nationalistic reasons, many companies still prefer to order within their national boundaries to export overseas subsidiaries have sprung up.

A corollary of this trend is the need to support the demand for replacement parts in car export markets. Within Europe, there a great deal of vehicle exporting has developed across national boundaries, this has seen a particularly powerful influence, leading not only to component exports but also the establishment of overseas subsidiaries. British companies which now have a large proportion of their turnover coming from Continental business include Associated Engineering, Automotive Products, Wilmot Breedon, IKN, Lucas, and Interims of Traight forward exports. Smiths Industries, Britax, the seat belt company, and Triplex, the glass and windscreen manufacturer.

Infancy

The third opportunity for the European companies is in the North American market. This trend is still in its infancy, but in the last two years or so a number of companies have shown that they have designs on the US, which has a vehicle market of roughly the same size as Europe itself.

The Chloride Group from Britain has already established a battery manufacturing business in the U.S., and it has been followed by Perkins in diesel engines, and Alfred Teves in brakes. Lucas and GKN have buoyant profits. And it is significant that most of the U.K. companies that have moved overseas have, in the past few

European medium commercial sales, 1976

	Units '000
Austria	14.7
Belgium	14.1
Denmark	23.4
Finland	8.8
France	109.0
Ireland	3.1
Italy	63.2
Netherlands	20.7
Norway	6.9
Portugal	5.9
Spain	30.2
Sweden	11.1
Switzerland	8.1
Britain	81.0
W. Germany	102.6
Total	501.9

one of its U.S. licences, Garlock Bearings, Automotive Products, which last year won a contract to supply clutches to American Motors, is also growing increasingly active in the U.S.

Most component companies believe that the international cross-flow of materials will expand within the next few years. Although nationalistic pressures are still extremely strong within many markets, and, indeed, sometimes force companies to set up a local base when this is not the most efficient method of manufacturing, the main thrust of production is towards sizeable operations serving several customers who are often based in different regions. The car manufacturers, for example, are already rationalising their own component production in this way: all of Ford's Fiesta transmissions are made at its Bordeaux plant in France.

The implication of this trend is that most markets will have to accept more imports in return for increasing their own exports. This can already be seen to be happening in the U.K., where component exports rose last year to £1,502.5m from £1,130.1m in 1976, while imports went up from £886.2m to £551.1m. Big component companies like Bosch, of Germany, have been active in the U.K. market for some time, and Teves has now won its first original equipment orders in Britain (at Ford and Chrysler) following its establishment of a plant in South Wales two years ago.

Nevertheless, Britain's balance on its component trade remains one of the healthiest in Europe, and a bright spot in the country's motor industry activities. This is partly because the U.K. has now become a low cost area in relation to the rest of Europe, and has therefore had competitively priced production, partly because it has had a sound level of technology, and partly because of the vigour with which British producers have sought to become truly multinational within the past decade. Most companies believe that establishing themselves overseas, while on the face of it threatening jobs and investment at home, tends to generate work for the domestic factories and research and development organisations.

Overseas investment, in countries with stronger economies and currencies than Britain, can also help a company's balance sheet, and show up in more buoyant profits. And it is significant that most of the U.K. companies that have moved overseas have, in the past few

years, pursued vigorous investment policies in Britain itself.

By far the most substantial amount of this investment is going into diesel technology. Perkins and Cummins, manufacturing engines, CAV making diesel injection equipment, and smaller companies like Weyburn Engineering, making diesel engine parts have all had large-scale expansion schemes underway in the last 12 months. With an annual world growth rate of at least 8 per cent, a year, the diesel engine business is bound to create significant business opportunities in the next decade.

In the U.S. for example, where about 200,000 light trucks are sold every year, with only a few diesels among them, there are very healthy expansion prospects. If U.S. cars also convert to diesels in some numbers—and General Motors will soon be test marketing a diesel Oldsmobile at a reported 200,000 units a year—the demand will be difficult to meet. Already British companies are beginning to show big improvements in exports of their diesel parts.

Changes

The U.S. is also creating opportunities for European manufacturers because of the pressing changes demanded in the kind of products which have been created by the energy crisis and emission legislation. These two forces will make U.S. cars lighter, and more complex. This, in effect, means that virtually every component in a car is being systematically redesigned in order to take out metal and therefore weight.

As this programme gathers pace, the U.S. manufacturers are looking to Europe with renewed interest to see what techniques can be borrowed rather than designed from scratch. Small diesel engines is one example of an area where European expertise has developed further than in America; front-wheel drive technology is another. Some estimates sug-

gest that by the early 1980s about 25 per cent of all the cars made in the U.S. could be front-wheel drive, which means a considerable miniaturisation in U.S. components because in the past neither space nor weight have been such crucial factors in American design as ease of maintenance and smoothness of operation.

Contracts

Last year, according to figures published by the Economist Intelligence Unit, component exports to the U.S. amounted to \$4.5bn, of which \$741m. came from Japan and \$372m. from West Germany. New contracts indicate that these imports are already expanding — the last year has seen Volkswagen involvement in engine deals with both American Motors and Chrysler, while both Burman and Cam Gears of the U.K. have clinched orders for the new Chrysler L car, and Hardy Spicer, the GKN subsidiary, has won a contract to supply Chrysler U.S. with transaxles.

After the U.S. some hopes are being held out that U.K. and other European component companies will be able to develop more exports to Japan. A Japanese trading mission visited France and the U.K. recently, and made encouraging noises, but no one knows whether it will stop there. Several companies already have licensing deals with the Japanese, and some, like Britax, the BSG components subsidiary, are pushing very hard to add direct exports as well.

But the best assurance for the future will be in maintaining a strong technological base for the U.K. industry. Developments such as the new Triplex 10/70 laminated windscreen, a breakthrough in safety glass which has won laurels in its application to the new Rover 3500, are the kind of achievements which will keep Britain in healthy balance on its motor components account.

Terry Dodsworth

U.K. COMPONENT EXPORTS/IMPORTS 1976	1976		1975		% change
	Value of exports in £m.	1,502.5	1,142.9	+31	
Value of imports in £m.	551.1	385.8	+43		

Fuel

CONTINUED FROM PREVIOUS PAGE

be 20 per cent lighter than the usual low carbon cold rolled plate used in the car industry. But how far the use of this metal can be extended is still speculative. Thinner sheet means more anti-rust treatment, which itself adds weight and increases costs; a similar dilemma is posed by the use of aluminium because, although this produces more economical cars, the material itself uses up much more energy than steel to produce.

The reduction of the size of components, and the use of lighter materials in this field as well, will be another area of acute interest to the vehicle assemblers in the next decade. Even in Europe, where there has been much more cause to design economically, the pressure is on to find better ways of trimming on materials. The Ford Fiesta, for example, was designed with the simplicity of its components, along with a minimum number of parts, in mind.

One short-cut in cutting down component weight will be the electronic route—substituting mechanical control and command systems with tiny computerised systems. Various instruments are already being converted to electronic control, and Smiths Industries, for example, is developing an electronic solid state instrumentation display.

In steering technology, as well, designers are now switching to the rack-and-pinion method because, although this system demands fairly inflexible positioning within the overall engineering of the car, it is lighter than most rival steering devices.

The search for lighter components is also being conducted over a wide front. In America, for example, engineers are now looking very hard at European methods, particularly in the technology which has sprung out of the front-wheel-drive concept. But possibly the most significant change to-day is that all design work is now taking size and weight into account as one of the vital factors in the development of new components. As an engineer from one

of the big car companies remarks, weight used to be a secondary factor to the functioning of the product and its contribution to the overall smoothness and quietness of a car—the emphasis of the past decade has been on ride and comfort rather than economy.

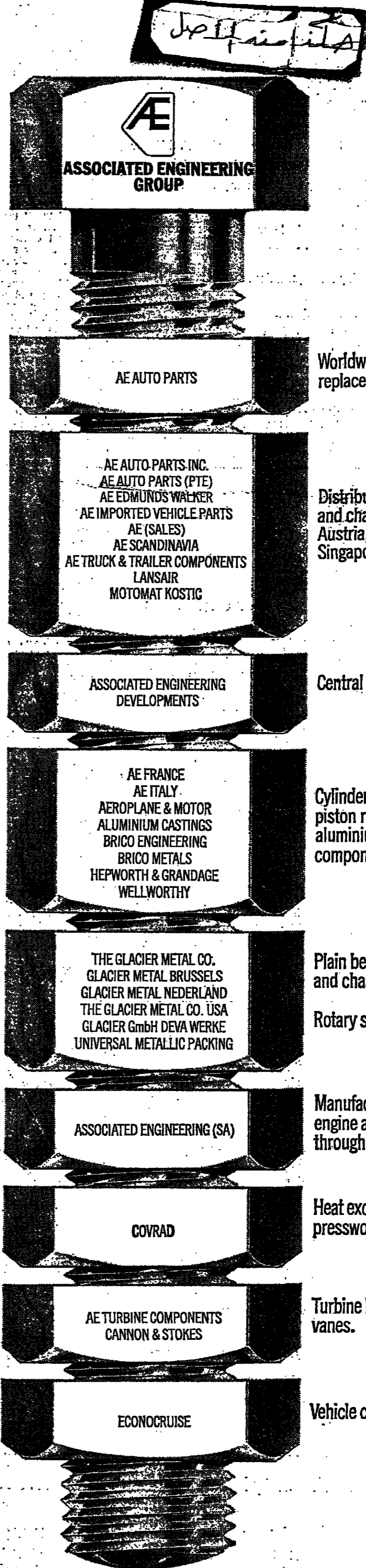
Tyre technology is another area where manufacturers believe they may be able to achieve some significant fuel savings. This is through reducing what is known as "rolling resistance" between the tyres and the roads through better design, and getting the vehicle to slip through the air with less drag by the development of better aerodynamics.

Stability

Although some engineers argue that aerodynamics are more important in achieving road-going stability in a car—indeed, the safety in a car—development in aerodynamic claim that an efficient shape can be worth at least 5 per cent on fuel consumption. This is why so many cars are now being given a droop-nosed appearance as in the Rover 3500 (which has improved petrol consumption significantly on the former model) or the Citroen CX. Even small hatchbacks like the Fiesta now have more aerodynamic shapes than the chunky forms of yesteryear.

Another design feature which is becoming more prevalent is the speed control devices which, at a flick of a switch, enable a motorist to keep a constant speed. Used widely in America, the system has been introduced in the U.K. with the Econo-cruise unit from Associated Engineering, and is expected to gain ground on the next generation of larger European vehicles. The idea is to save fuel by preventing the marginal, but significant, changes in speed which are wasteful of fuel, and which are unnecessary on much long-distance motorway driving.

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EUROPEAN VEHICLE COMPONENTS IV

Battery limitations

EVEN WITH the most optimistic forecasts of the ability of the internal combustion engine to solve energy problems and the most pessimistic forecasts of the development of electric vehicles, it is nevertheless clear that they will have a positive role to play for limited purposes at least. That, at any rate, appears to be a consensus view from European capitals, and one which is all the more persuasive since field trials with various types of electric vehicles have given little immediate comfort. The kind of research establishments, manufacturers and others are looking at is 20 years hence, when North Sea oil begins to run out, and will in any case be extremely more costly than at present whatever the source.

At one end of the scale electric two-wheelers could replace mopeds. The development of a novel DC motor of disc shape that can be coupled to a wheel provokes a radical reappraisal of a drive system, for battery driven cars could also have a part to play in households where there are two or more cars used for regular commuting or shopping. But the most effective, and certainly one of the most challenging applications, is in bus transport. Public transport operates in a programmed vehicle environment. At peak periods there are twice as many vehicles on the road as at other times, so that 50 per cent of a fleet operates for two or three hours a day at speeds of around 10 mph. Thus the operating range is around 35 miles per tour of duty.

Two electric buses—Chloride's Silent Rider and Lucas's smaller "midi" bus—have been in operation in Manchester since the early months of 1975. Passengers like them very much, but availability was less than 50 per cent, for each, which compares with 80 per cent for the diesel buses with which they were being compared. Major causes of failure were the controller unit in the Silent Rider and the experimental batteries in the "midi". In both the

regenerative braking feature caused problems. The "midi" bus, on the shorter, central area route, came very close to being able to complete an eight-hour shift without recharging. In France EDF has been promoting the development of electric vehicles for several years past and in 1973 concluded a co-operation agreement with Regie Renault. Specifications for utility vehicles have been drawn up by potential public users, and an international bid has just been launched as a result of which the first line of prototype vehicles to be manufactured is expected. Projects include specially designed buses for operation in renovated town centres and vehicles for refuse collection. (Electric refuse vehicles have been in operation for some 30 years.) Boats for use on canals and other waterways, both for commercial and private transport, have also been designed by EDF. It believes that in

1980 7 per cent of the total vehicle capacity in use could be electrified. It is thought that 60 per cent of the power required would come from nuclear power stations. In the Netherlands a 100-passenger electric bus is being designed by the departments of electrical and mechanical engineering at Delft University of Technology. With battery technology at its present stage this project is estimated to need a six-ton trailer load of batteries. There are also mixed power sources projects like a battery-powered bus for town pick-up and setting-down that would link up with overhead power cables on motorways like a trolleybus. The batteries would be recharged during the journey. In Britain the Electricity Council Research Centre is testing a converted Bedford CF van that uses a series motor with a battery-scanning controller and a Hobbs VKD

hydraulic transmission. The van accelerates from 0 to 50 mph in 12 secs, and has a speed of 50 mph. The company believes this type of vehicle can "fully provide" the service as many fleet operators. One of the biggest barriers to rapid development is comparatively low energy density of lead acid batteries. Improvements in efficiency allied with weight reduction plus the ability to recharge quickly, are confidently predicted. Automatic water systems have been devised to minimise maintenance. But real take-off will probably arrive with a different form of battery coupling. A great deal of research and development is being concentrated in this aspect, but none is thought to be anywhere near commercial exploitation.

Peter Cartwright

Mixed fortunes for diesels

EVEN BEFORE the fuel crisis of 1973 world demand for diesel engines was growing at 3.5 per cent a year. Natural growth would have pushed sales up from a 1975 level of 3.4m. to a predicted 4.6m. engines a year by 1982. Now CAV, the major world supplier of fuel injection units (it has 7.5m. in use) forecasts a doubled rate of increase to 5.8m. diesels a year in 1982, and these kind of figures are also supported by remaining unchanged, of continuing progress to meet environmental constraints, and perhaps above all of developing engines much less sensitive to the quality and composition of fuels.

development of alternative prime movers. However, no viable competitor to the diesel engine is discernable on the horizon, and for the rest of the century it is certain it will remain the dominant power unit in the tractor, truck and increasingly in the light van and passenger car fields. For there seems more likelihood over the longer term of the diesel's fuel economy figures being improved, of continuing progress to meet environmental constraints, and perhaps above all of developing engines much less sensitive to the quality and composition of fuels.

Concern

On the other hand it is quite possible that the current concern with the protection of health, together with associated safety programmes, will result in some temporary over capacity in diesel manufacture in the next year or two. Much will depend on inflation rates, and whether sufficient finance can be found for investment in productive capacity of a kind that generates employment and a lively economy. The diesel engine is most closely associated with tractors. In Europe it is fitted to nine out of ten of them, and the figure worldwide is nearly as high. More than half the trucks are also diesel-powered. But in North America dieselisation is only just getting under way under the spur of energy saving and the increasing cost of fuel. The cheapness of gasolines hitherto did not warrant the installation of diesel

engines since it was excepted to recover higher capital cost. North America is now the market beckoning diesel engines and component suppliers. There is a whole range of petrol-powered equipment to be replaced. The competition do so will be intense, but let us look at the U.K. makers—Perkins, Rolls-Royce, British Leyland and Gardner—and component suppliers like CAV, which is 30 per cent of the world demand for injectors, and GI which already has picked up big U.S. contracts, have a better than even chance of winning substantial shares of the market for imported, technically advanced products. In Europe, the biggest market potential has been identified in the light van and truck (under 6 tonnes) where diesels figure to the somewhat modest figure of about 30 per cent. In this sector of the market growing by around 15 per cent a year. This year demand for diesels in the U.S. is expected to be ahead of that in Europe, reflecting the different rates of economic recovery, and the occupation with environmental standards, particularly crowded cities, and which bound to siphon off some investment that would probably otherwise have gone to more productive purposes. But demand should strengthen appreciably, possibly even in developing regions like the Middle East, and Australia in some industrial countries.

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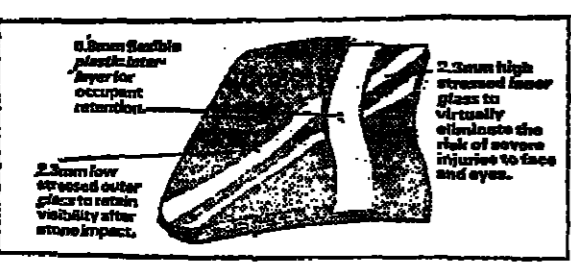
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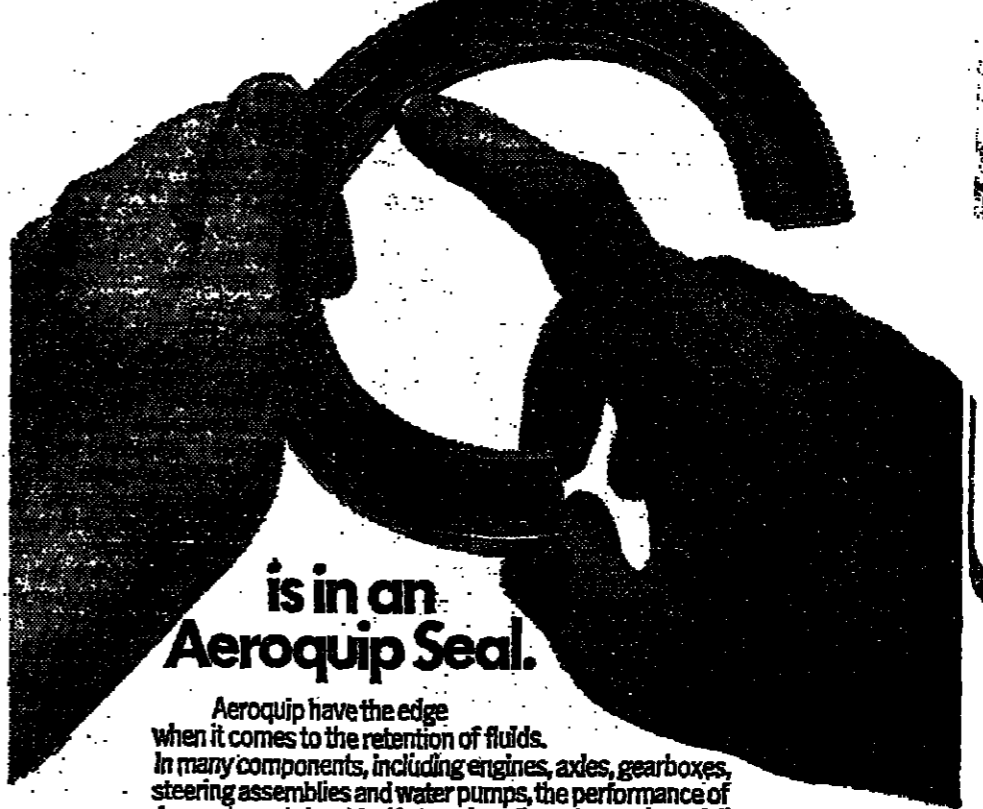
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John... file

A strong American presence

WHEREAS THE big multinational car companies put down their roots in the 1930s, the component groups only set out their worldwide expansion in earnest in the 1960s. For many of the parts suppliers moves overseas began about 1960, based mainly on their desire to keep up with the demand for replacement parts in the cars exported by their American groups, however, there was a much more deliberate policy of growth, as they sought new markets to compensate for the stagnation at home in the U.S.

As a result of this disciplined approach the U.S. has spawned the largest group of truly multinational component companies in Europe today. These companies have entered into agreements to build up joint empires, and they have tried to balance their investments—and thereby their risk—across as many national markets as possible. Only the surprising group of U.K. manufacturers matches the pan-European methods of the American invaders.

Diversity

Their interests are also very widely based. I.T.T., for example, is a company making brakes, shock absorbers, and selling fit exhausts; TRW is in the valves, chassis suspension and steering parts; Bendix makes brakes; Tenneco Walker exhaust manufacturing and fast-fit business; Eaton, Ingersoll and Dana are in the heavy truck supply industry; Cummins and Massey-Ferguson (through Perkins) make diesel engines.

The effect of this invasion has been to accelerate the moves to rationalisation and the formation of larger component manufacturing groups within Europe. Although this process began before the arrival of Americans, the industry was

still highly fragmented in the early 1960s. It was some way behind the car assemblers, who were creating larger groups in order to achieve better manufacturing economies, and were beginning to look for component operations with the necessary size both to manufacture in consistent high volume and to keep costs down.

There is little doubt that the U.S. companies have contributed a great deal to this process of achieving greater size and efficiency. I.T.T. and TRW, for instance, are noted for the strength of their financial control systems. Although they run extremely diverse groups on a loose managerial rein—each individual manufacturing unit retains a great degree of autonomy—there is general agreement that management has been tightened up by their budgeting systems.

At the same time, some of these U.S. concerns have now reached an impressive scale. Cummins and Perkins are among the largest diesel groups in Europe, while I.T.T.'s Teves subsidiary claims to be the largest independent brake manufacturer, and TRW is among the top valve producers.

Clearly size alone can give these manufacturers some advantage over competitors. But to this can be added the advantage of being able to pool research and development effort between the different activities. Both the I.T.T. and TRW automotive companies, for example, have access to electronics expertise elsewhere in other parts of the groups, which may prove to be extremely helpful in the development of more electronic component parts.

In addition, the European automotive activities can draw on the backing of the U.S. expertise and knowledge in the same fields. All the big companies that have come into Europe have their own sizeable operations in North America, with extensive research and development facilities, and all of them have

been able to export some of their technical know-how.

This flow of information basically comes in two forms. First, there is the pure product knowledge, in which American devices are taken and transferred onto European production lines. This trend has been particularly noticeable in the commercial vehicle field, where the needs and the kind of vehicles used have been much more akin in the two markets than passenger cars. Thus Cummins and the transmission companies have tended to use American designs in Europe.

Second, the American companies have brought new manufacturing know-how to their European subsidiaries. Used to producing on a larger scale, and coming from an industrial environment where production engineering is an extremely strong discipline, the U.S. concerns have proved a strong influence in revamping and modernising the industry. Within the past year, Eaton, TRW, Cummins and Tenneco-Walker have all been active in substantial investment programmes.

Outlook

The investment activity shows little sign of diminishing although there have been repeated rumours of withdrawals by various companies because of anxiety over political instability in Europe. There is no doubt that most of the U.S. groups have been worried by the political and industrial troubles in countries as diverse as Italy, Britain and Spain. But most of them would be extremely reluctant to retreat to their domestic market, having carved out reasonable profits in Europe and seeing a continuing prospect of growth.

What is happening, on the other hand, is an accelerating trend towards European technology in the U.S. Because of the development of smaller cars in America, which will lead towards front-wheel drive and other technological devices

which have their roots in Europe, the big U.S. multinationals can be expected to use their overseas resources to respond to the needs of the American car industry. Several companies have already shown how European technology can be transported across the Atlantic. TRW, for example, has for some years been exporting rack and pinion gears made by its Cam Gears subsidiary in the U.K., for use in the Ford Pinto—and it has

now added to this with an order for Chrysler's new small "L" car. Perkins, bought by Massey-Ferguson in the 1960s, has now established a diesel engine plant in the U.S., which will aim to supply the units for the small trucks which in America are still mainly powered by petrol engines. Teves, the I.T.T. brake manufacturing subsidiary, has also recently laid down manufacturing plant in the U.S.

Alongside these exports and

investments, there will be even more mileage to be built into the steel radial tyre. In fact, it is arguable that any such attempt would be self-defeating. As it is the typical set of steel belted tyres fitted to a new car will last until that car is traded in by its original owner at 35,000 to 40,000 miles. Even longer lasting (and higher priced) tyres, though technically feasible, would appear not to make economic sense or even to be a customer requirement.

Conversely, there is much to be said for a motorist accepting a slight reduction in tread life in order to have even better wet grip than the modern radial tyre now provides.

What will supersede the radial tyre as we know it today? Industry views differ. Five years ago, when Dunlop unveiled their Total Mobility tyre (since renamed the Denovo fail-safe tyre) the answer might well have been: a tyre that can be driven on for 100 miles when punctured and allows the driver to retain control after a high-speed blow-out. In those pre-energy crisis days the Total Mobility concept appeared to have everything in its favour and Dunlop confidently anticipated large and lucrative licensing deals with tyre makers in Europe and, particularly, the U.S.

That has not happened. The Denovo is still available only as optional equipment on a handful of Leyland cars and on two Fiat models, the 120 and 131 that are sold in Britain. Despite its technical brilliance, the Denovo has been commercially disappointing. There is still little sign of enthusiasm for it on the part of British car makers other than Leyland. No mainland European car manufacturer has expressed much interest in it though they accept that it takes the terror out of sudden high-speed tyre deflation and would make it possible ultimately to eliminate the spare wheel.

General Motors has turned Denovo down, at any rate in its present form, on the grounds of cost and complication which, they consider, would lead to servicing and production line fitting problems. The definitive fail-safe tyre will, they say, be one that, paradoxically, does not fail at all. It will be a tyre that never goes down rather than one that can be driven on for a limited distance after losing its inflation pressure.

That is clearly a long way off. In the meantime, all the tyre makers other than Dunlop and, to a lesser extent, Firestone, appear to be seeking ways of

breakaway with anything like the same degree of suddenness as those of a few years ago. The excellence of the steel belted tyre and its longer tread life—about twice that of a cross-ply tyre—has caused the tyre industry considerable problems. Replacement tyre sales are now a static market. Gentler driving habits due to the desire to save fuel and the stricter speed limits that followed the oil crisis, have aggravated the situation. Industry car tyre sales have only just risen above the 1973 level to reach 15m. units last year. After a forecast rise of under 0.5m. units this year, it is reckoned they will drop again to around 14m. by 1981, followed by a modest increase of perhaps 0.6m. units in 1982.

These forecasts—made by Dunlop Holdings' managing director J. Campbell Fraser at the recent National Tyre Distributors Association's convention—are based on the assumption that car maker and motorist alike will not ask for

steel belted car tyres now account for about 75 per cent of industry sales and the proportion is expected to rise to over 80 per cent by the early 1980s. Textile belted radials are now sold mainly in the replacement market because the car makers increasingly insist on steel for original equipment. Almost without exception, today's cars are designed to make the most of the steel radial's superior dynamic properties and to suppress its only disadvantage—a tendency to ride harshly on coarse surfaces.

Even this problem is much less evident in current designs of steel radial than it was only five years ago. Though it is not obvious from the outside, the construction of today's steel radial car tyre reflects intensive development of both design and material. The effect has been to preserve its very high mileage potential and its saving low rolling resistance while giving it more subtle handling characteristics. When pushed to the limit, the modern steel radial does not

breakaway with anything like the same degree of suddenness as those of a few years ago.

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giving a normal car tyre and wheel some degree of runflat capability. The idea is to avoid the problems inherent in the use of a specialist tyre/wheel combination while offering the motorist adequate protection from the danger and inconvenience of in-service tyre failure.

Various ways have been proposed. Some are simple (like Goodyear's glass fibre reinforced plastics "tyre" inside a normal radial ply cover). Others are more elegant. They include a Uniroyal plan for using a special kind of tube inside a tubeless radial that will keep the tyre firmly on the rim after sudden air loss and support the weight of the car while it is driven 50 miles or so to a service station.

Compromise

These compromise solutions are likely to be particularly suitable for use with a new generation of ultra low-profile radial tyres such as the Pirelli P7 and Michelin TRX. Squat in shape, these tyres will become popular at first on up-market, high-performance cars, but are expected later to spread down to family saloons. They greatly increase cornering powers and improve handling without any deterioration in ride comfort. The Pirelli P7, in cross-section, half as high as it is wide, is already standard equipment on the Porsche Turbo and 928, the Fiat 131 Abarth and two Lamborghinis. Michelin's TRX is optional on the Peugeot 604 and Fiat 132 two-litre and will be seen on other cars later this year. Dunlop is known to have its own ultra low-profile tyre, but has not yet made any public announcement, probably because they want to avoid any action that might damage Denovo's prospects.

Truck tyre design moves at a much slower pace than that of car tyres because, overwhelmingly, the most important attribute of a truck tyre is that it should last for as long as possible and then yield a retreadable casing. Nearly all heavy trucks now run on radials, with both casings and belts of steel. Future developments are likely to include the lowering of profiles to about 70 per cent height/width ratio, to reduce vehicle platform heights, allow for larger brakes and diminish steering effort. Dunlop has also proposed a system that would allow a truck with a burst tyre to drive slowly to somewhere safer than a motorway hard shoulder where the wheel could be changed.

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Stuart Marshall



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EUROPEAN VEHICLE COMPONENTS VI

The Midlands has long been the traditional home of the British components manufacturers. On the next two pages PETER CARTWRIGHT looks at some of the main companies involved and how they have developed their operations in Europe.

The leading names

LUCAS

MANY PEOPLE accept as almost inevitable America's 90 per cent share of the civil aviation market. British vehicle component makers are not aiming quite so high in their field, but they are well on the way. This applies particularly to specialised products, of which Lucas Industries' Fabstrip is one of several outstanding examples. Fabstrip is a flat version of the complex car cable harness and can be run under the carpet with substantial savings in assembly times.

It is the sort of product that last year helped to take total sales to £719m. This compares with £284m in 1970, and this year the figure is expected to reach around £850m. At any rate that is what top management is pitching for in an attempt to break the £1bn mark by 1980.

Taking into account overseas manufacture of electrical components, brake equipment, diesel injection units, plus sales of aerospace products, 70 per cent of sales are generated outside Britain. Lucas includes the Gliding brake interests which have 25 per cent of the European market and, together with licences, 20 per cent of world markets outside the U.S. Its CAV division claims to be the world's largest diesel injection equipment makers, while the vehicle battery division runs neck and neck with Chloride.

As Mr. Charles Davidson, main board commercial director points out, the 50,000 U.K. employees in 130 factories help to keep the Haddenham (Bucks.) export operation busy by providing it with around 250 tons

a week of 40,000 different items. "The other half of our exports comes directly from the factories—and then we have another 40 factories in 34 countries also contributing a growing share." Lucas has a commitment to export £150m of products directly in this export year—and in the first five months we are running slightly ahead of target." Counting in direct exports via vehicles fitted with Lucas starters, lamps and other components, the export performance is considerably higher.

In Europe Lucas is reasonably happy with the way events are shaping. "The reduction in tariff rates, to mention one item, has helped to develop business, particularly new contracts," Davidson explains. The next big target for the group is the U.S., where a bright future is predicted for the electrical division and CAV diesel injection equipment. "We are planning to multiply the present £25m turnover in North America tenfold by the early 1980s," he says.

Among the new technically advanced products that should help to boost sales is the digital fuel system that replaces the former analogue system and the group's reliance on Bosch know-how. The licence from Bosch helped Lucas through the development period, "but we have now gone beyond the analogue system," Mr. Davidson said. "Our digital system matches accurately the engine requirement at any speed or throttle opening, whereas the analogue unit takes the nearest approximation." In addition to its potential in an economy-conscious Europe, it obviously has a similar potential in America, where target miles per gallon for the "gas guzzlers" has been laid down

as 20 miles by 1980 and 27 miles by 1985.

Like other component makers which have grown up with the motor industry, Lucas has paved the way for exports by providing spares organisations in the countries to which vehicle producers export, as well as developing components that can be bought in Europe, or outside it. "Nor should it be forgotten that we are also closely identified with the development of electric traction buses, vans and taxis," Mr. Davidson adds. "In pursuit of what we believe to be a new kind of vehicle we have developed batteries, motors and controls for electrical vehicles."

GKN

GKN IS the engineering giant of the U.K. automotive component industry, and a major force in the European original equipment market. European sales last year were £230m, out of a total of £639m for this division, which yielded just over half of all GKN's profits. As Mr. Gordon Griffiths, managing director, recalling the recent £12m contract to supply drive parts for a new American front wheel drive car, points out, the strength of its technology and salesmanship is taking it into the heart of the world's biggest motor manufacturing nation. But while America and Canada may provide the biggest growth potential, Sweden, Germany and France are the biggest customers.

GKN's automotive division in Europe has 15 manufacturing plants and 22 service centres,

mainly for reconditioning parts, employing a considerable number of the 35,000 employees working outside the U.K.—one in three of the overall labour force. The European work force will be supplemented by another 17,000 or so by the autumn if GKN's bid worth £32.5m for almost 75 per cent of Fichtel and Sachs, the dominant clutch makers in Germany, goes through. The result of the appeal by the Cartel Office against the judgment of the Berlin appeal court lifting its ban on the merger should be known in the next couple of months or so.

During this somewhat anxious waiting period GKN is understandably reluctant to talk about it, but a merger would obviously significantly strengthen the group's presence in Europe and take it into new areas. For while it manufactures clutches in the U.K. through Laycock Engineering, these are mainly for the agricultural equipment market. More than 80 per cent of the car clutch market is held by Automotive Products.

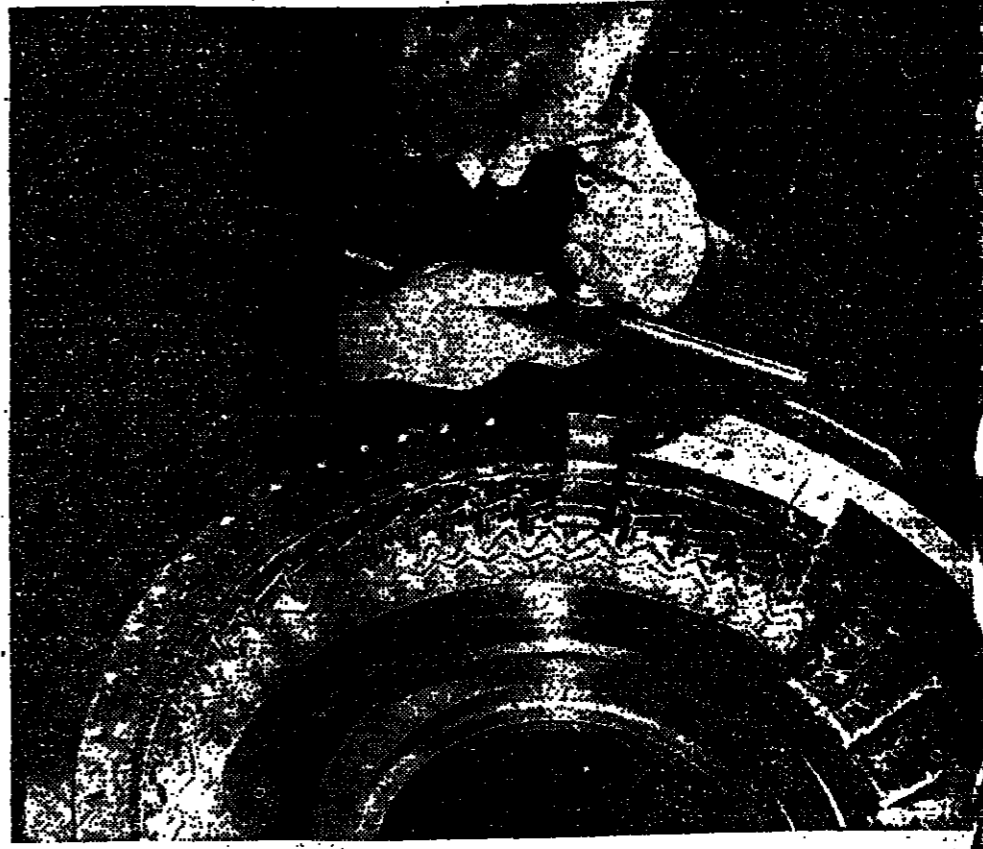
The Uni-Cardan transmission component factories in Germany and France help to make GKN the largest supplier in the world of constant velocity joints, through which the engine drives the front wheels, in fwd vehicles. This is the reason why it was successful in winning the £12m American contract.

In the U.K., too, its main product area is in transmission parts—propeller shafts for conventionally driven vehicles, power take off shafts for off the road agricultural and construction equipment, steel wheels for trucks and alloy wheels for cars, axles, bearings, truck and tractor cabs, connecting rods, crankshafts and many other forged parts.

With the European market as a whole only just over half of the U.S. vehicle parc, Mr. Griffiths sees a very well worth while expansion of GKN sales "across the board" in the next two or three years without taking into account anything Sachs might contribute. "We have been steadily building up our potential in the European market over the past three or four years and we are now at a stage where we can look forward with even greater confidence to seeing it prosper," he says.

Undoubtedly membership of the European Economic Community had helped the group—much more than has devaluation—to secure business. "But it doesn't and can't explain why for instance, we displaced the Japanese from an important diesel component contract. The basis was a deeply imbedded technology allied to keen salesmanship and at least as good deliveries."

As Mr. Griffiths points out, it is no accident that GKN provides more commercial vehicle engineering components than anyone else in the U.K., if not in Europe. But he does not like to dwell too long on Europe. He has an acute awareness of the faster growth potential in North America, where energy (fuel) conservation legislation is driving the U.S. auto industry towards the economical front wheel drive systems now widely employed throughout Europe, and the developing markets in South America, like Brazil. "We haven't done so badly in making our mark with certain products, like constant velocity joints and crankshafts," he remarks. "The products we've been working on for the past two or three years look quite interesting too."



Mould making at Dunlop's

DUNLOP

MENTION DUNLOP and the instant reaction is to think of tyres—partly no doubt because of the historical association of name with the inventor of the pneumatic tyre. When you are sitting comfortably in your car it may occur to you that the seat may be clothed in Duplo-pillo, especially if it is the new Alpine or Fiesta. It probably would not occur to you that the hose in the engine compartment, or perhaps some of the suspension components, may have come from the same stable, or that you may well be travelling on Dunlop wheels (as well as the Carnaby Street end of the wheel business—those light alloy wheels with the fascinating designs—wheel makers do not publicise themselves very much).

In fact, after an arrangement with GKN-Sankey some years ago each picked up some of the other's business to concentrate on truck wheels (GKN) or car wheels. Well, that is a good many miles on the clock, ago. Nor should it be forgotten—because Le Mans enthusiasts are priding for recognition—that the famous string of wins by Jaguars in the gruelling 24-

hour race owed a crucial advantage to being equipped with Princess and the Rover—the first disc brakes. Nowadays while the 126 and 131 Fiat Dunlop just collects the royalties. The disc brake was a spin off from aeronautical developments which has now reached a cant proportions. Looking at the future of the tyre market in Western Europe Mr. Wheeler, main board director and director of reports encouraging sign- the tyre market in W. Europe as a whole may n. improving. "Car ma- turers are generally on- good volumes, but com- various divisions and cross fertilisation of ideas must benefit those divisions whose livelihood depends largely, if not wholly, on the automotive industry.

If structural carbon brakes of the type developed for the Concorde, for instance, became a requirement on specialist cars or trucks, the technology already exists, and this is equally true of other areas of activity.

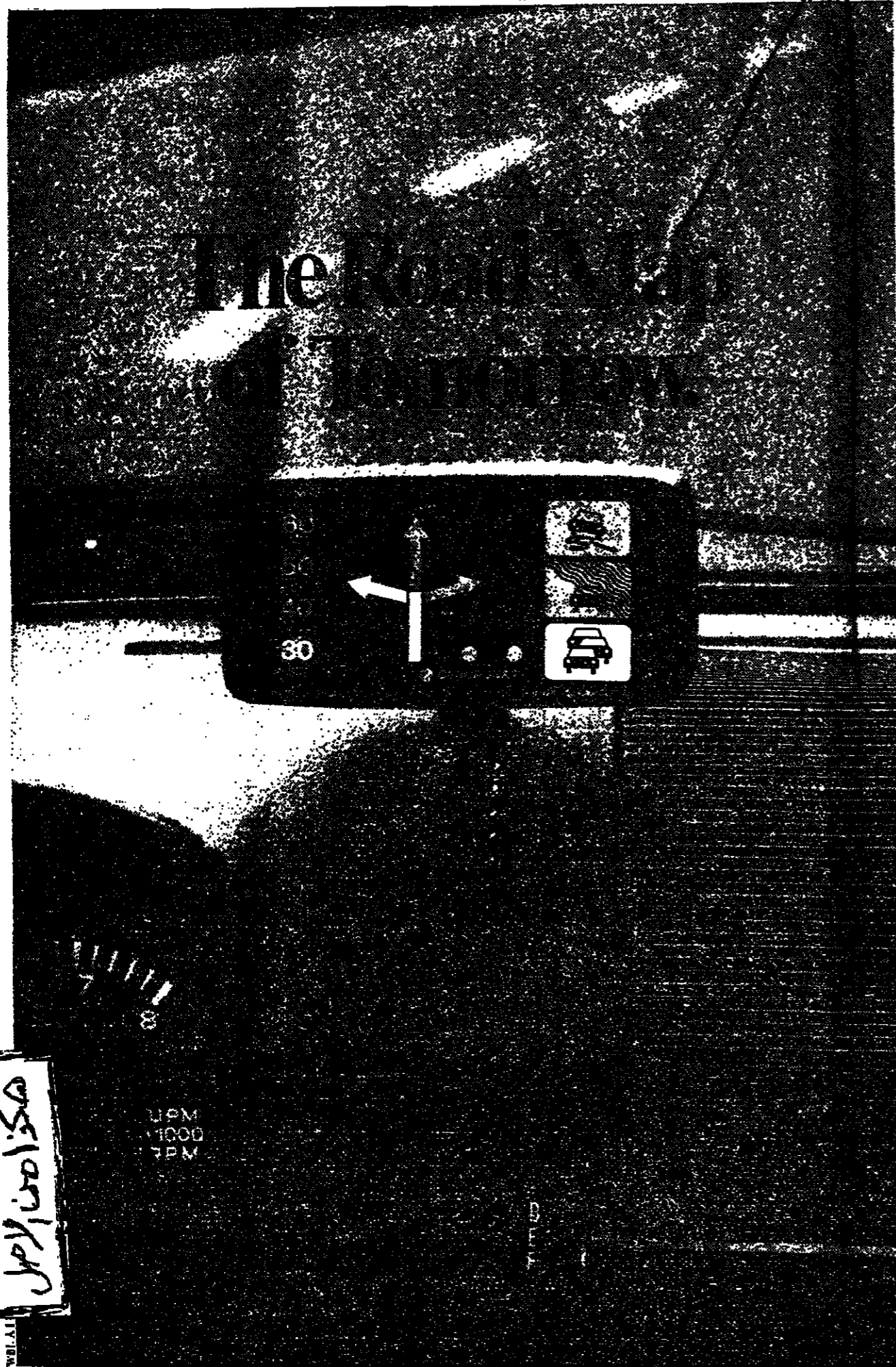
Many of the world speed record cars have been shod with Dunlop tyres, the latest technological achievement of this division (now associated with Pirelli) being the run-flat tyre, such developments as the Three British cars have now dis- perised with the fifth or spare

announced can also be expected to use Denovos, products which has now reached a cant proportions.

As a multi-national organisation with a wide spread of activity in fields demanding sophisticated technology, the interaction of various divisions and cross fertilisation of ideas must benefit those divisions whose livelihood depends largely, if not wholly, on the automotive industry.

As Mr. Wheeler points out, there is a growing emphasis on safety that will be supported by EEC regulations and performance and reliability. "The U.K. centre of tyre technology developments as the flat tyre will maintain that

perised with the fifth or spare



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ALI may seem to be a science fiction fantasy. But this revolutionary

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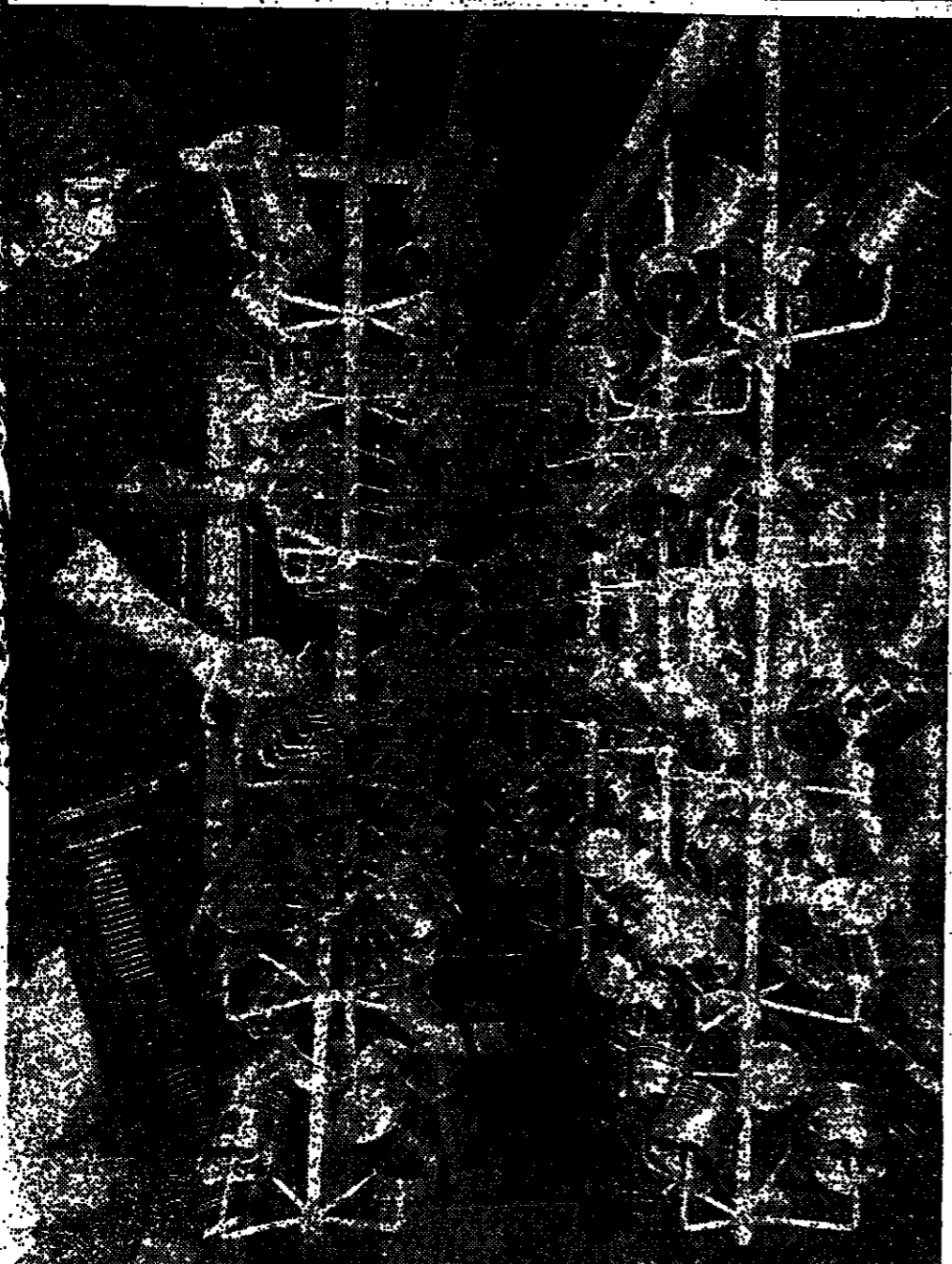
Television viewers will have seen the Olympic Games through Bosch eyes, as many of the sporting events were televised by Bosch Fernseh cameras. News and entertainment in cars can be received with Blaupunkt auto sound systems.

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BOSCH



ASSOCIATED ENGINEERING

FOR MANY suppliers the switch from petrol to diesel-powered transport influences their business quite considerably. But one of the big assets of Associated Engineering is that its range of pistons, piston rings, cylinder heads and other engine components, whether for petrol or diesel, differs mainly only in size and complexity. The technology and types of production equipment are similar.

The group is one of the most prolific engine component makers in the world. Some 40 per cent of its business, including radiators and brake shoes, is developed abroad, at some 15 per cent (around £46m.) of it directly from Britain. The groundwork for its dominant position in the European specialised market in which it operates was created in the early sixties when manufacturing plants in France and Italy were added. These supply all the major vehicle makers from Alfa Sud to Volkswagen. Two years ago the group acquired a German bearing company which it is using to expand the original equipment market.

Overall execution of an ambitious programme is in the hands of Mr. John Collyear,

Preparing pistons for lin plating at the Warwick plant of Hepworth and Grandage, a member of the Associated Engineering Group.

group managing director. He intends as far as possible to reach his objectives through direct exports, and by further expansion of overseas manufacturing interests.

The group will also be looking closely at opportunities for joint ventures, such as its growing stake in Garlock Bearings, the U.S. licensee for plastic-lined bearings for office and domestic equipment and general industrial uses. Among the 25 manufacturing licensees are Daido Metal, Japan, which has been making bearings for many years, and Nippon Piston, making sintered piston rings, a technique that the group pioneered.

Mr. Collyear sees direct exporting, expansion of overseas manufacturing and joint projects or licensing as the three main prongs of the programme to take overseas earnings, at present £100m., near to £140m. in the early 1980s. Licensing alone, he pointed out, was already yielding a useful £1m. a year.

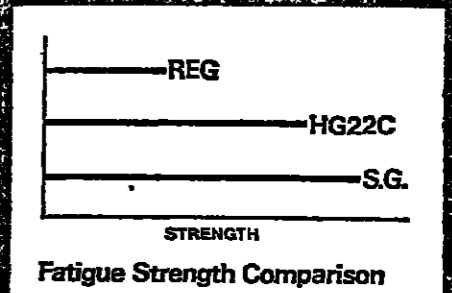
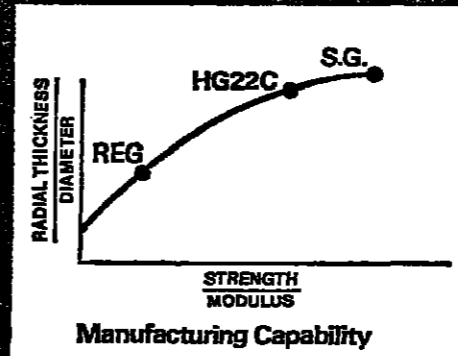
Libe Perkins Engines and CAV, which makes fuel injection units, Mr. Collyear sees the encroachment of diesel engines into the world vehicle markets — particularly in America — as one of the most promising and lucrative trends over the next decade or two.

Our already substantial presence in the market is backed by Wellworthy which, together with our research centre near Rugby, constitutes the biggest research and development facility in the Western world devoted to diesel engine components," he claims. "Our bearing division is also a noteworthy pioneer in new materials to meet the requirements of high performance diesel engines."

The group recently completed a piston ring plant and is currently spending £35m. annually on new plant and other facilities. "And this is not a once-only injection. Rather do we see the rate of investment growing." Some of this will be used to extend the product range and widen the base of suitable technology. "But," Mr. Collyear emphasises, "investment must enhance growth prospects and must always be accompanied by higher productivity if we are to reap the full potential of product development and new techniques." Like other leading component suppliers, he sees the strong demand in Europe continuing, with activity in the automobile industry worldwide possibly being at a rather higher level than general economic activity.

FLEXIBILITY FOR THE ENGINE DESIGNER

HG.22C A MATERIAL EVERY ENGINE DESIGNER SHOULD KNOW ABOUT FOR PISTON RINGS



Typical Figures

Modulus of Elasticity	Kg/mm ²	9100	16,700	22,570
Bending Strength	Kg/mm ²	460	15,000	22,570
Hardness	HRC	28-30.5	40.5	41.0
Structure		Grey	Cast	Cast

- HG.22C has been developed specifically for top ring application
- Can replace S.G. Iron at extremely competitive prices
- Manufacturer's engine tests prove that side wear is reduced
- Technical information available on request

HEPWHITE

Hepworth & Grandage Limited St. John's Works Bradford West Yorkshire England BD4 3TU
Telephone Bradford (0274) 29555 Telex Number 51466

ARMSTRONG are growing from Strength to Strength



The U.K. Automotive Components Industry has weathered the problems in the motor industry during the past few years and emerged even stronger. Armstrong is one of the largest Automotive Component manufacturers in the U.K. and they, in turn, have grown in strength. The development of Armstrong is reflected in increased plant investment, expansion of their product range, and the development of new products, all of which has contributed to the overall financial success of the Armstrong Group.

Recently Armstrong have increased their product range from shock absorbers, garage equipment, industrial fastenings and steel tube to include exhaust systems, turned parts, rotating electrical equipment and injection moulding plastics. Armstrong's most recent acquisition has been the purchase of approximately 280,000 sq.ft. of factory premises at Hedon Road, Hull. The Group now utilizes in excess of 2,000,000 square feet of manufacturing and distribution space in the U.K.

Overseas growth has also taken place and the Armstrong Group now operate with 6 production plants and 9 factories producing under license, as well as a wide network of distributors, agents and subsidiary companies. The Group have also expanded their distribution network, under the name of Armstrong Autoparts Ltd, and the total number of branches, including Automobilia with 6 outlets in France, now totals 155.

Armstrong Group philosophy is to manufacture products to high standards whilst maintaining competitive prices. Their current range of shock absorbers is now unequalled in the automotive field. From the Research and Development Centre at Fulford, York research is continuously carried out into new products, new production techniques and materials to keep Armstrong to the forefront of the industry. Armstrong invest today for growth tomorrow!

Grow with ARMSTRONG from Strength to Strength
Armstrong Equipment Limited, Melton, North Ferraby, North Humberside HU14 3HY

MEMORANDUM
The Technical Director

Subject: **THE LAYSTALL SILICON CARBIDE PROCESS**

This process developed in close collaboration with the Ministry of Defence has proven over the last eight years that the rate of wear experienced with internal combustion engine cylinder bores can be drastically reduced.

Effectively, the process entails impregnating the bore surface with silicon carbide particles by mechanical means, similar to that used when honing under blocks in the normal manner. After impregnation, the surface is lapped and polished to provide a finish consisting of grooves formed in a cross hatch pattern for good lubricating oil retention and a high percentage of flat plateaux on which the piston rings may run.

Due to the extreme hardness of silicon carbide, processed cylinder bores or liners have been found to enjoy a greatly increased service life without creating other disadvantages. Certainly, the life expectancy for blocks or liners manufactured from or treated with conventional materials, including chrome. This process has been applied to steel, cast iron and aluminium blocks/liners, very successfully. It is a standard feature of Chieftain Tank engines currently being produced.

As British diesel and petrol engine manufacturers are presently carrying out evaluation trials and it is believed that within a short time, this process will be used on a production basis by many of the leading engine manufacturers.

Economics are very attractive; for example, the cost is about one-tenth of that to chromium plate and in the case of dry lined engines, cylinder block may be impregnated directly and so overcome the need for fitting liners with a significant cost saving.

This process is, of course, equally applicable to many other products where the rate of wear is a problem.

The company is already well-known in the diesel engine field for the production of Coronad Cylinder Liners, Crankshafts, etc....

For further information contact:
Laystall Engineering Company Limited
Liner Division
1000 Street, Wolverhampton WV2 2BU
Tel: Wolverhampton 0902 51789. Telex: 338099

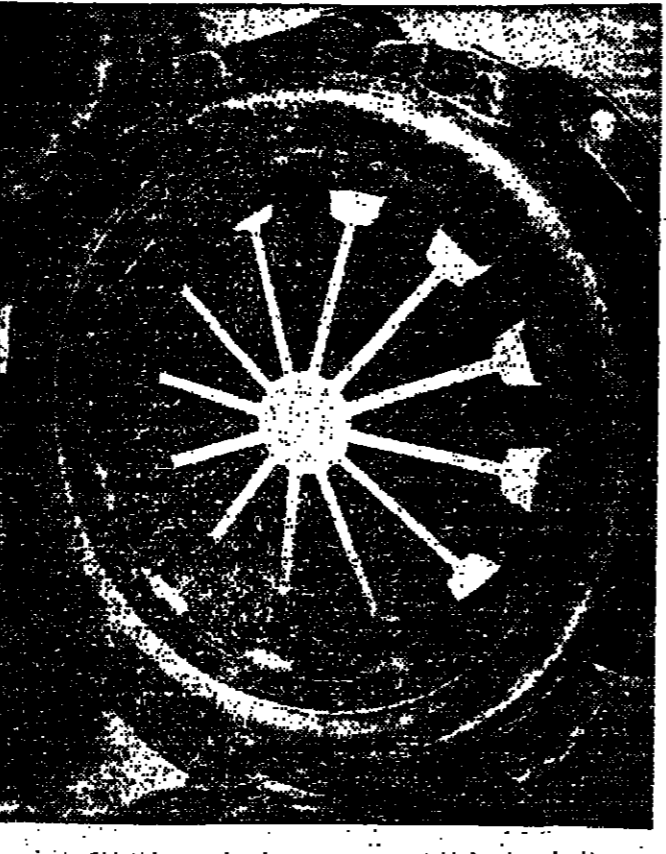
AUTOMOTIVE PRODUCTS

HELPING TO win the World Grand Prix championship with vital parts like brakes and clutches, while simultaneously helping the opposition to carry off the manufacturers' championship is not a bad introduction for any component supplier. Mr. John Panks, deputy chairman and chief executive of Automotive Products, smiles broadly when reminded of this and says it is nice to have faith in the technology and performance of one's products publicly demonstrated in the toughest competition. He quickly goes on to discuss volume bread-and-butter business.

It just so happened that 1976 saw the group's fortunes turn strongly upwards as projects initiated several years previously began to mature, so the double in the motor racing world crowned equally hard fought battles over a much wider territory. Like other component manufacturers, Automotive Products generally has to wait for the introduction of new models before it can get its name added to the original equipment list.

"Our brake and clutch contracts with Chrysler, Peugeot and Renault, and with Savem and Bertel on the truck side, together with a general sales drive, should increase our French business by half, and has laid the foundations for other major contracts before the end of the year," Mr. Panks said. Overall, AP's crucial breakthrough in EEC markets last year should help to accelerate exports to them by 70 per cent and take direct exports from the Leamington-based group to nearly a third of original equipment production.

Individual products have been designed specifically to suit each customer's requirements and are backed by substantial investment in special-purpose machinery and equipment. Some of the units for the French contracts, for instance, are produced on automated lines at the rate of around 10,000 a day and assembled in clean room conditions which required an investment of £2m. In Germany sales to truck makers are well on the way to doubling. When criticism of quality control in British factories, and especially in the automotive industry, is widely voiced, AP can point to the fact that it was one of the first — in 1975 — to win approval for its standards under the tough Defence Standard 05-21.



The new DST clutch from Automotive Products.

Why we couldn't run this ad. last year..

It's very simple. Last year we were Rearsby Components, Beans Engineering, Butec, Electrics, Llanelli Radiators, Oxford Exhaust Systems, SU Fuel Systems and Alford and Alder Components.

Seven separate companies independently making parts for cars, trucks, coaches and off-road plant and equipment. And independently supplying them as original equipment to most U.K. and many leading European vehicle manufacturers.

This year we are one marketing organisation, SU/Butec. And much progress has been made.

Now you need talk to only one source for everything from remanufactured engines to heavy duty alternators, regulators and starter motors, from heat exchange products to exhaust systems and petrol tanks, from handbrakes to carburettors,

from power steering assemblies to fuel pumps to axles.

One of the widest ranges, in fact, of quality components available in Europe. Supported by aftermarket services including a comprehensive range of parts, customised packaging, technical information, together with product and service training.

Moreover, each SU/Butec factory contains its own engineering, design and development facilities, and a production capability supported by appropriate quality control.

Let us know your requirements. Ring our Director of Sales and Marketing, Tim Worrall, at Thame (084421) 4511 or write to SU/Butec, Dorner Road, Thame, Oxon OX9 3UB. We will be pleased to hear from you.

SU/BUTEC
Automotive Components
What new cars and trucks are made of.

DISPUT

The

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Tel: 021-458 2081 Telex: 338695

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Hot Brass Forgings, Synchronesh Rings, Battery Terminals, Steel Tube Manipulations, Oil Pick-up Pipes and Filters, Complete Assemblies
P.O. Box 5, Dudley, West Midlands DY1 4RH
Tel: 0384 54411 Telex: 339627

DUPORT FOUNDRIES LIMITED
High Repetition Grey Iron Castings
Tipton, West Midlands DY4 7UX
Tel: 021-557 3963 Telex: 336845

JOHN HARPER & COMPANY LIMITED
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Tel: 0902 66601 Telex: 337865

BRIDGTOWN INDUSTRIES LIMITED
Foam Seating Interior and Exterior Automotive Trim Items
Green Lane, Bridgtown, Cannock, Staffs WS11 3JW
Tel: 05435 6021 Telex: 338363

DUPORT LIMITED-ENGINEERING DIVISION



EUROPEAN VEHICLE COMPONENTS VIII

Replacement market

THE VEHICLE replacement market has always offered a tempting market for "pirates" offering non-genuine replacement parts and probably always will. In the U.K. there have been plenty of them and some are still about. Until the polypropylene battery container came along to foil backyard operators using discarded cases to revamp into cut-price products the second-hand battery market was a prolific area for this type of enterprise. Others made or marketed more sophisticated engineering components and in the course of time became "honest" and were accepted as suppliers of original equipment.

The growing volume of legislation dealing with transport safety and product liability has been a deterrent to anyone thinking of entering the market, although it must be admitted that the increasing cost of servicing and replacement work has given a substantial fillip to the Do-It-Yourself movement and the search for cheap products. Nowadays a lot of the so-called pirating emanates from some of the newer vehicle manufacturing countries like South Korea and Spain, especially in sales to developing countries where legislation is apt to be vestigial.

This aspect of the replacement, or after market, has been a powerful influence on major component suppliers to take defensive action by enlarging their service facilities. The growth in the market has likewise been accompanied by an "all makes" approach by which major component makers supply other fast moving lines like silencers, brake pads, fan belts and so forth, to maximise the turnover of European or worldwide service organisations.

Another strand of this complex after market fabric is the expanding structure of manufacturing largely resulting from successful original equipment makers to supplement or replace direct exports from U.K. factories. Indeed, the presence of so many British or joint venture plants on the Continent, where the tendency to source component supplies internally within vehicle groups, has proceeded and facilitated trans-national vehicle manufacture of the kind operated by Ford and General Motors (Vauxhall/Opel).

It has also taken leading suppliers directly into the imported car after market. Most European makes, from Alfa Sud in Italy to Volvo in Sweden and Volkswagen in West Germany contain components from U.K. suppliers sourced either in the U.K. or from factories on the Continent. One in four or five cars are "foreigners" and this proportion is expected to grow to one in three. Most of those already here are beginning to come up for their MoT test or otherwise need more comprehensive servicing, and it is no insuperable task for a major supplier to span the 150 or so imported models with a selected range of replacement parts.

Decision

Nor have the vehicle manufacturers been slow to move down market. This is a movement stimulated by the decision of some of the big American oil corporations, like Gulf and Western, to expand their after market sales, especially on the filling station forecourts. In this country Shell was one of the first to exploit the possibilities.

Nor have the opportunities been overlooked by the car makers in the U.K. They have followed the front runners by establishing their own comprehensive range of spares in addition to servicing distributors and garages with their own replacements. Chrysler's Mopar and Leyland's Unipart schemes were among the first and when British Leyland later came along with BUTEC, based on the bus and truck electrical component organisation, it brought howls of protests in some quarters on the score of "unfair" competition.

Identification of who does what in the High Streets, at the spares trade counters and on the forecourts is not always easy for the uninitiated. A. E. Edmunds Walker is a well-known name in the trade. Its parent is Associated Engineering, the world's largest independent supplier of engine components like pistons, piston rings and bearings. But these are marketed through AE Auto Parts. Other components from the group, and those bought in tend to be marketed through Edmunds Walker. Altogether Edmunds Walker controls a substantial number of outlets at the second

stage, having chains in Austria, Canada, Sweden, Portugal and Singapore.

It is a vast and growing market. Including Britain, the European vehicle population is estimated to be around 106m. and growing at around 6 per cent a year. The value of the after market, including accessories, can be no more than a guess, for it has never been accurately quantified. It is no easier to guess what it is even in Britain.

No two people agree on what is a replacement part and what is an accessory, for the dividing line is often blurred. Some vehicle manufacturers fit two door mirrors as standard, for instance, and others none, calling them accessories instead. Expert estimates put the U.K. after market as high as about £1bn. but this seems optimistic to others, who think it is nearer half that, and put the European figure at £1bn. to £1.5bn., though this may be too low.

One of the more reliable figures is that exports of parts for vehicles last year were £1.6bn. and that these exports have been growing apace over the past several years. Indeed, the export achievements of the component makers rescued the car sector from an adverse balance. They also demonstrate the excellence of the British marketing strategy and general performance. In a sense, the component suppliers have taken over from the vehicle makers.

Specialist

After the war the parts market belonged almost exclusively to the vehicle producers. "But," Ford admits, "none of us appreciated it and we let it go." Now they are trying to get it back, but they face growing competition. As already indicated, the component makers have been expanding their capacity and facilities rapidly, and were among the first to offer an all-makes range, and to get into the High Streets and discount stores as well as acquiring specialist service activities. Burnham Oil, for instance, bought Quinton Hazell, one of the biggest independent replacement parts maker, whose policy was never to exceed 10 per cent in original equipment, and which had a good export record.

Lucas, the electrical giant, added in-car entertainment, fan belts, and other fast-moving items to its forecourt and service depots business. Automotive Products, in key safety areas of production with brakes, clutches, silencers and steering components, now has a chain of 50 service depots, and its export business is illustrated by the 300 tons of products shipped daily through its Banbury parts establishment. The pace has been a hot one and the pursuit equally fast.

Ford of Europe was early in the field and has just celebrated the tenth anniversary of its formulation. Its European operations are co-ordinated from Ford Cologne, and grew out of less ambitious parts organisations.

While the U.K. company still buys out selected items like shock absorbers, it has significantly reduced dependence on outside sources by manufacturing spark plugs, carburettors, radiators and other items. It foresees the probability of a diminishing range of replacements being required because of improving quality. This factor has extended engine life to up to 70,000 miles without a major overhaul, will be likely to stretch it further to near 100,000; other parts like axles will similarly last longer.

Morover, the trend to fit as standard items like radios formerly regarded as extras, and legislation providing for seat-belts will also reduce the number of optional items. On the other hand there will be some new products, of which air-conditioning for small cars is likely to be one. Nevertheless, Ford believes that by 1987 and with a vehicle population in Europe of nearly 123m., the market will have grown to \$88.7bn., including nearly \$6bn. of Ford-only products.

When SU-BUTEC was formed some 12 months ago following a recommendation of the Ryder Committee on the future operations of British Leyland it was met with a considerable and vocal opposition from the component industry, which saw part of its livelihood being snatched from it by the State-owned giant. In fact it has not turned out quite like that.

SU-BUTEC was formed out of specialist fuel and electrical systems interests, and supplies original equipment as well as becoming more deeply engaged in the after market. For instance, it supplies carburettors to Volvo and Chrysler, hand-brakes and hinges to Ford and Vauxhall—besides selling products made by them and com-

ponent suppliers in order to provide an all-makes range—though it has still some way to go to match Ford's ability to service over 90 per cent of all European-produced vehicles.

This selling of each other's products, and selling branded products made by rivals—rather like the supermarkets—has been one of the phenomena in the development of the market, and underlines the degree to which competition has advanced.

After market operations are among the most highly sophisticated, complex—and lucrative—in the vehicle industry. The expertise which U.K. manufacturers have been able to bring to bear has served them well in the European and other markets. The trans-national producers like Ford, General

Motors and Chrysler vehicle makers, and Associated Engineering other major companies components suppliers, given them the bases which to enlarge their of individual markets. BUTEC is following them Europe with the first depots in Holland.

Most of the market growing again, with Ge having more disposable income per head and less intricate DIY work, but other countries (including the U.S.) fall this trend strongly. A recent component trade show in Geneva showed clearly European manufacturers made great efforts to cat on their marketing—and quality is very good.

WE'RE AHEAD and we mean to stay there.

We're Europe's leading exhaust system organisation, supplying original equipment and replacement silencers for virtually all British cars and trucks, and a range of foreign cars too.

Fifty years of experience in manufacturing exhaust systems is backed by research and development facilities unequalled in the silencer industry.

That's why our competitors follow the leader—TI Silencers.

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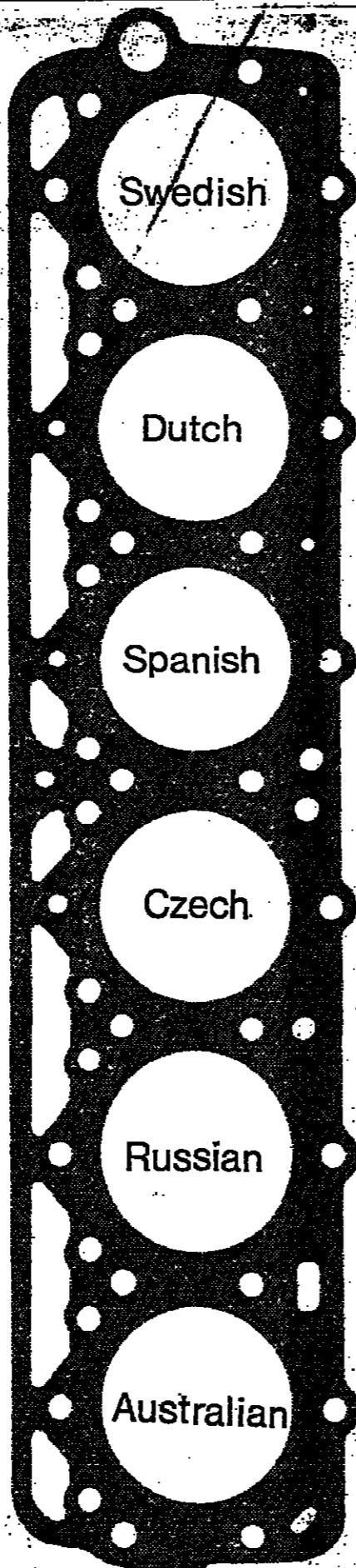
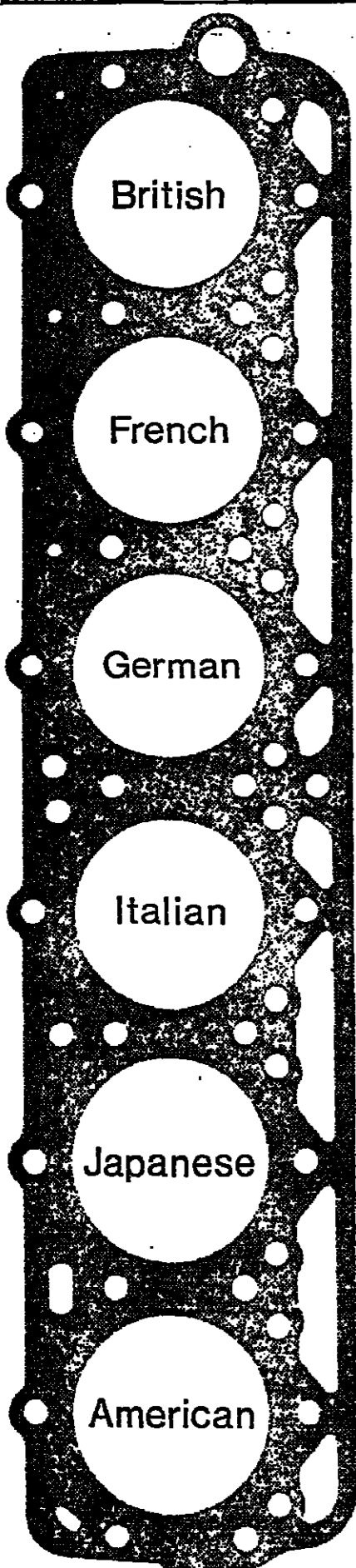
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COMPANY NEWS + COMMENT

ISSUE NEWS AND COMMENT

BP 0.5m. reprint after more demand for shares

Powell Duffryn climbs 43.4% to £13.69m.

AN ADVANCE in taxable profit from £3.2m to £5.8m in the second half lifted Powell Duffryn from a depressed £9.5m to a record £13.69m for the year to March 31, 1977. Sales were £24.7m, better at £20.33m.

INDEX TO COMPANY HIGHLIGHTS table with columns for Company, Page, Col., Company, Page, Col.

fact of around £1m, and correcting this still looks at least a fairly long term exercise. With the shares at 19p, 6p below nominal value, the group, which capitalised £2.5m, is apparently contemplating a capital re-structure for the near future.

Progress at Greenfield Millets

SALES for the half year to April 30, 1977, of Greenfield Millets expanded from £13.2m to £24.8m, and pre-tax profits increased from £212,000 to £316,000. The directors say that the 12-month profit will reflect a satisfactory increase over last year's £746,000.

William Baird to raise £2.88m.

William Baird, the textile engineering group, is proposing to raise £2.88m from shareholders by way of a rights issue of 24m Ordinary £1 shares. The basis of the issue is one-for-five at 108p per share. The shares closed 5p lower on the market at 134p.

BY MARGARET REID

A REPRINT of another 500,000 prospectuses and application forms for the Government's 0.5m. offer of record-breaking Petroleum shares has now been sent out to banks and Post Offices after strong demand in many areas. The extra print brings the total number to the extent of 1.2m.

M Y Dart 1-for-7

M Y Dart is raising £24,000 by way of a one-for-seven rights issue at 26p each. The directors are also forecasting pre-tax profits for the current year to July 2 of not less than £1,623,000 against £1,175,000 last year. They also intend to raise the net dividend from 1.5p to 2.143p per share (13.2p gross).

Streeters expects increase

SINCE THE lifting of the Government's moratorium on public expenditure affecting construction, Streeters of Godalming is again receiving a reasonable flow of contracts for which to tender. While it is anticipated that the workload for 1977 will be similar to that for the year under review, he says, the contracts in hand are maintaining the increased profitability trend of 1976.

Newcastle Water stock

Newcastle and Gateshead Water Company has issued £2.5m of 13 per cent. Redeemable Debenture Stock 1984 at 97 per cent. The issue is payable as to £23 per cent. on June 27 and £72 per cent. on February 27, 1984.

COUNTER-INFLATION ACT 1977

Table listing companies and their dividends under the Counter-Inflation Act 1977, with columns for company name, dividend amount, and percentage.

comment

Powell Duffryn has outstripped half-time expectations by producing profits 13 per cent. higher than the previous peak in 1973. And this after interest charges which rose 70 per cent. in the year as a result of a 24 per cent. increase in working capital demands plus an £8m. expenditure programme.

comment

After really taking off in the second six months of last year, Drake and Scull recovery has continued in the first half of 1977 and appears to point the group towards a full-year pre-tax level of around £1m, after terminal costs—£220,000 at half-time.

comment

The growth seen last year at Greenfield Millets has continued with a 49 per cent. pre-tax rise in the first half so far. Earlier market estimates of £1m. profits for the full year now look on the low side. The strength of demand for leisurewear and camping equipment is generally quoted as the reason for Greenfield's success but this is only part of the story.

Upsurge by Drake & Scull

UNDERLINING THE marked recovery in all trading companies in the U.K. and overseas, pre-tax profit of electrical, mechanical and construction engineers, Drake and Scull Holdings was £529,000 for the six months to April 30, 1977, compared with £17,000 in the previous comparable period.

In smoother trading conditions the shipping division started a recovery; timber and quarries did well in a far from easy construction market; pollution control had a better year; fuel distribution had a busy second half of the year to make up for the absence of demand last summer; and oil and chemical storage, which has considerable growth potential, increased profits, he reports.

With decreasing recession in both the U.K. and French construction industries, the building services contracting division incurred a loss. However the division has started the current year with an improved order book and should commence to benefit from work secured in the Middle East, he adds.

BRIXTON

ANNUAL REPORT 1976

Table comparing 1976 and 1975 financial data: Net Rental Income (£4,525,000 vs £3,909,000), Pre Tax Profit (£1,990,000 vs £1,628,000), Value of Investment Properties (£83,796,000 vs £72,240,000), Earnings per Share (3.42p vs 2.89p).

- Maximum permissible increase in dividend recommended.
1 for 10 Bonus Issue proposed.
Surplus of £4,920,000 from revaluation.
Funds available to finance all current commitments and undertake further developments where suitable opportunities arise.

Copies of the Report and Accounts for 1976 may be obtained from the Company Secretary, 22-24 Ely Place, London EC1N 6TQ.

Brixton Estate

International investors in commercial property

LOCAL LOANS

The coupon rate on the local authority yearlings bonds is up from 9 1/2 per cent. at par to 9 3/4 per cent. issued at 99 1/4. The bonds mature on June 28, 1978.

Scottish Heritable

In his annual statement Mr. Cochrane Duncan, chairman of The Scottish Heritable Trust, predicts that the group should again produce encouraging results in 1977, following the record pre-tax profit figure of £535,133 for last year against £233,310 (tax reported on May 25).

Associated British Foods

'Our wide spread of interests at home and abroad adds up to a very successful year'

Financial highlights table for Associated British Foods: Sales (1490.9), Profits before tax (80.4), Profits after tax and minorities (34.6), Net assets (396.0), Capital expenditure (62.0), Earnings per share (9.86p), Dividend per share (2.08p).

- The results demonstrate the strength of Associated British Foods through its broad diversification in the food industry at home and overseas.
Excellent progress by our smaller United Kingdom based manufacturing companies.
In the United Kingdom we have continued our programme of heavy capital expenditure and covered our working capital requirements, without increasing our borrowings.
A higher return on assets has been achieved, demonstrating the efficient use of our assets.
Net margins overseas were maintained at the previous year's level of 6.7%, with those in the United Kingdom increased from 4.2% to 4.7%.
Dividends increased by 20%.
Even with an intensification of competition, the strength of the Group is such that we view the future with confidence.

King & Shaxson Limited, 52 Cornhill EC3 3PD. Gift Edge Portfolio Management Ltd. Portfolio 1 Income Offer £2.77, £3.13, £2.71. Portfolio 2 Capital Offer £1.75, £1.75.

Handwritten signature or stamp at the bottom of the Brixton Estate advertisement.

Jeffrey A



It's been a busy year for Jackie Stewart - and for us.

On location in the U.K., Jackie Stewart O.B.E. prepares to make a TV commercial for Britax

So busy, in fact, that we turned in a £4.7 million profit, twice what we made in 1975.

Some other highlights from the BSG International results last year:

33% of our earnings now come from abroad.

57% of our profits come from our manufacturing interests.

What achieved this kind of result for BSG International in 1976?

Car safety equipment for a start.

Jackie Stewart has been helping to maintain 'Britax' leadership in Britain and right across Europe. Incidentally, we've now added a new child safety seat and the 'Sunliner' sunshine roof, to the 'Britax' range.

What with Jackie's efforts and successful marketing by our factories

in France, West Germany, Holland and the U.K., we are now Europe's No. 1 producer of seat belt and other vehicle safety equipment. In fact, virtually all of Europe's leading car manufacturers fit our seat belts, mirrors and other components.

European motorists, too, know that quality matters where safety equipment is concerned. We like to think that is why most of them now choose products made in our factories.

Beyond Europe, BSG International safety products—either through direct exports or by licensing agreements—are fitted by car makers in Australia, Japan and South Korea.

Nearer home, our Bristol Street Motors car dealerships make us Europe's largest Ford dealers.

In addition to holding franchises for Vauxhall and Chrysler, we now also represent Opel, Volkswagen, Audi, Fiat, Citroen, Alfa Romeo, Mercedes-Benz, Datsun, Simca, Porsche and BMW giving us a major stake in the fast growing imported car market.

On top of all this, we have an industrial fastener, steel processing and heavy engineering side.

And a furniture factory.

And we are the U.K.'s biggest aircraft seating manufacturer.

To get the full, diverse story of BSG International and its achievements ask our Company Secretary, Ray Thorne, for our 1976 Report and Accounts.

BSG International

Burgess House, Coventry Road, Birmingham B25 8BB. Telephone: 021-707 0490.

Plessey 14% higher despite P.O. cuts

ON SALES ahead by 16 per cent to £50m, pre-tax profits of Plessey company advanced by 14 per cent to £18.5m for the year to March 31, 1977.

In the fourth quarter profits were up by 20 per cent to £11.6m. Profits by 10 per cent to £18.1m. Sales have grown by about 20 per cent in each of the last three quarters.

Full-year earnings are shown to have risen from £14.9m in 1976 to £18.5m for the year to March 31. This is an increase of 23.5 per cent.

The major item of £7.2m of extraordinary items relates to a provision made in respect of all costs including research and development—disruption and dilapidations—that can be reasonably identified at present, arising from the major cutback in British Post Office requirements.

Other items are exchange losses of £2.65m (profits £2.84m), including associates £1.29m; other losses on business closures of £0.9m, (£1.1m), and other credits of £10,000 (losses £249,000).

The directors say the cumulative effects of Post Office cuts adversely affected the results so that profit growth came from the major item of £7.2m, an extraordinary item relating to a provision made in respect of all costs including research and development—disruption and dilapidations—that can be reasonably identified at present, arising from the major cutback in British Post Office requirements.

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As reported, on June 13, net deficit before tax for the 18 months to December 31, 1976, was £241,000, compared with £387,874 for the previous year. The loss per £1 share was 4.7p (5.4p) and there is again no dividend.

Mr. Sparborg says that the company's financial position underwent a serious decline during the period under review owing to the combination of a fall in the market value of its investments both at home and abroad and a rise in the amount of its liabilities in respect of foreign currency borrowings resulting from worsening exchange rates. The company found itself by the end of the period in breach of the borrowing limits imposed by both its sterling debenture and its foreign currency loan.

BOARD MEETINGS

The following companies have notified dates of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available whether dividends concerned are interim or final and the sub-division shown below are based mainly on last year's timetable.

TODAY
Interim—Amalgamated Television, Bond Street Fabrics, Dundee and London Investments, South American Investment, Threlknap Trust.

FUTURE DATES
Coro Exchange, July 14
Fisons, July 21
Associated Television, June 22
The Associated British, July 27
Glanville, July 28
Sainsbury, July 28
National Caribbean, June 22
Reynolds Group, June 24

increased activity in the rest of the group, particularly overseas. About 50 per cent of world-wide sales were from international business, by operations outside the U.K. or by direct exports from the U.K.

The sharp cutbacks in post office orders had reduced the percentage of orders to about 50 per cent of 1976-77, but there were no present plans for further reductions beyond the 4,000 already cancelled over the current year group capital expenditure is expected to total around £34m against some £23m.

Mr. John Clark, the chairman, said later that the improving trend for group results had continued into the current year. He declared the emphasis is still overseas in terms of investments but there is also an improving trend in the U.K.

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was no supporter of industry suggestions that there should be a regrouping of the major electronics groups in the U.K. to strengthen them against overseas competition.

“We can do perfectly well in export markets of our own,” asserted Sir John. “I do not believe that any further diminution and destruction of competition in this country would do anything to advance this country,” he said.

See Lex

SECOND HALF pre-tax profits up from £1.6m to £1.6m. The Bradford Property Trust for an advance of £53,467 to £31m for the year ended April 5, 1977.

STATED Earnings per 25p share are ahead from 23.4p to 23.6p, and the net final dividend of 3.0549p lifts the total from 3.5426p to 4.0009p.

Profit of £1.6m, an increase of 36 per cent, is based on a new share capital of £1.6m, and is divided into £1.6m and £50,000 for the year to April 5, 1977.

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DIVIDENDS ANNOUNCED

Company	Current payment	Date of payment	Corresponding dividend	Total last year
Allied Breweries	1.25	Sept. 23	1.12	2.37
Breadfruit Property	0.35	Aug. 27	0.77	1.12
Electric and General	0.8	Aug. 11	0.63	1.43
Electrocomponents	2.49	—	2.28	4.77
Evans of Leeds	1.8	—	1.39	3.19
Greenfield Milllets	0.577	Aug. 5	0.36	0.937
Hambros	3.885	—	3.53	7.415
Manna and Overton	1.05	Aug. 2	1.03	2.08
Plessey Company	1.71	Jan. 1	1.27	2.98
Powell Duffryn	3.05	Aug. 26	2.59	5.64
Schlesinger American	4.253	July 29	—	4.253
Selection Trust	11.73	Aug. 3	10.2	21.93
Teelemit	1.93	July 29	1.85	3.78

Dividends shown per share net except where otherwise stated. *Equivalent after allowing for scrip issue. †On capital increased by rights and/or acquisition of shares. ‡Total of 1.5p net on increased capital has been forecast. §Gross throughout. ¶Per 25p share.

(Llp). Gross income was better at £2.94m (20.74m). Company figures include Washington Investment Company from February 4 to May 31, 1976.

WHITBREAD spending plans. THE investment plan at Whitbread amounts to some £16m, over the next two years. Mr. Alex Bennett, chairman, announces in his annual statement.

AT HALF the directors reported that earnings were significantly higher and they expected the overall trend to continue during the second half.

Electric & General Inv. at £291,000. After tax of £184,337 profit of £15,498, net income of £25,259, net interest of £1,230, net dividends of £1,133.

BEST EVER £4.5m. by Electrocomponents. SECOND-HALF pre-tax profit of Electrocomponents, £4.5m, up from £2.4m in 1976.

BIDS AND DEALS. Ex-Greenwood & Batley chief criticised by Panel. Mr. Michael Buckley, a trustee and possibly an error of judgment by the accountants Peat Marwick Mitchell, whose Birmingham office were auditors of Greenwood and Batley for over 20 years.

FORWARD TECHNOLOGY. Forward Technology Industries has redeemed, at a price of £370,000, its £520,000 12 per cent (unlisted) convertible unsecured loan stock 1973-79.

CLUBS. EVE, 199, Regent Street, 730 0557. A Club for all-in. Music, Three Spectacular Dances. Mon-Fri. Closed Saturdays, 01-437 8450.

MINING NEWS

Selection Trust lifts earnings by 72½%

BY KENNETH MARSTON, MINING EDITOR

LONDON'S Selection Trust world fallen from a high of 500p this morning and industrial group has risen in view of the group's better than market forecasts with a three new base-metal mining projects in Australia and Canada.

AS IN other parts of the world, new mining projects in Australia and Canada are impossible to justify under present economic conditions and current metal prices.

S. Africa's uranium production contributed to an improvement in the value of South African sales apart from gold. In 1976, uranium sales increased over 1975 by 1.9 per cent.

Mr. Plumbridge stated that South African uranium production increased for the first time since 1974 during 1976, with an 11 per cent rise over 1975.

Selection Trust's outlook for the current year is promising. Under recently announced new arrangements with Heurama, further increases are expected as will rise to approximately £7.5m.

Very large assistance. Bank of England Minimum Lending Rate 8 per cent. (June 21, 1977).

The Scottish Heritable Trust Limited. Mr. A. Cochrane Duncan, CA, covered the following points in his statement to shareholders for 1976.

Exports during 1976 amounted to £1,471,257 (£703,636). Property and Investments: This division again produced satisfactory profits and achieved some increases in rental income which should help profits in 1977, despite a slowing-down of residential sales.

Registered Office: 11 George Square, Glasgow G2 1DY.

Handwritten signature/initials.

Carving up the razor market

BY STUART ALEXANDER

IF YOU had breakfasted in one of the 2,700 McDonald's hamburger outlets in the U.S. this morning, it is quite likely you would have been given a free disposable razor.

Not because the taste of the burger might make you want to wash your face with a razor, but because the razor is a part of a \$3m. campaign by Gillette to boost the sale of its throwaway razors.

The company is backing its judgment with \$7.7m. in the U.S. having already spent \$5m. on development and tooling. The new razor will be about 40 per cent more expensive than Trac II so as well as being the first in Gillette's words, "the real innovation since 1971 it has also been placed much more up-market, an aggressive counter market, an aggressive counter market to Bic thinking."

Bic had had most success in the U.S. market of the French country, the original launch country. Greece, which is also where the bulk of its throwaway razors are manufactured, through the steel for the blades is British, the company is proud to say.

Why, then, the anxiety at Gillette? Mainly, one suspects, this was because the company as a whole was feeling very exposed and if nothing else was certain, any market success on the part of Bic was almost sure to be at the expense of Gillette.

Also, Gillette had to move while there was still a chance that Bic could bring off the ASR deal. Other companies like Wilkinson Sword and Schick were taking Bic's U.S. challenge seriously enough to develop disposables of their own, and both had seen Bic take on Gillette in the disposable lighter market as well as its record with ballpoint pens.

Gillette has brought actions against Bic in several European countries, claiming infringements of patent rights. In a bitter move Bic brought an action in the U.S. asking a court to judge that certain U.S. patents assigned to Gillette were invalid.

Then followed the FTC intervention and Bic abruptly pulled out of all talks with ASR.

Bic has been around for a long time, holding as it does one third of the world market for ball-point pens. But Gillette has been its success in the American market that has more to do with the ubiquitous ecology lobby.

The company had a highly successful launch on the Paris market in 1977 when over-subscription took the share price up to an already high Frs.850.

It is since then that Gillette, still guided by its founder Baron Marcel Bich, has repeated its success in the U.S. market and now 50 per cent of earnings from the razor market.

Aggressive marketing in the form of price discounting and heavy advertising has been the name of the game but Gillette has far more strength in depth in the ubiquitous ecology lobby.

So, in addition to streamlining its products and improving its administration, the company can look forward to maintaining its lead in the U.S. market.

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than the soap and after-shave lotion which go with it.

Undoubtedly the failure of Bic to buy ASR has hurt them more than they would like to admit, and it has made their job of cracking the U.S. market that much harder.

But the elusive Baron Bich saw his company's total sales rise in 1976 by 40 per cent to \$276m. and profits double to \$12m. With a compact group of products and a heavy reliance on ease of manufacture, low sale price, quick repeat and highly aggressive marketing he has struck at the base of Gillette's business.

In a business where volume and market share are vitally important, Gillette has taken care to react quickly and strongly. In the end it could be that both will be stronger, at the expense of some of the interested spectators.

At the end of the day, however, the copious financial muscle of Gillette has always seen it through. When the chips are down Gillette, can sustain losses or break-even far longer than anybody else in the field and the company has shown itself prepared to fight hard in the market place and on television to retain and protect its oldest and most cherished baby.

Without the base which American Safety Razor would have given it, Bic faces a long and uphill struggle with a new product in a conservative market.

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Jeff

This announcement appears as a matter of record.

\$100,000,000

AMAX INC.

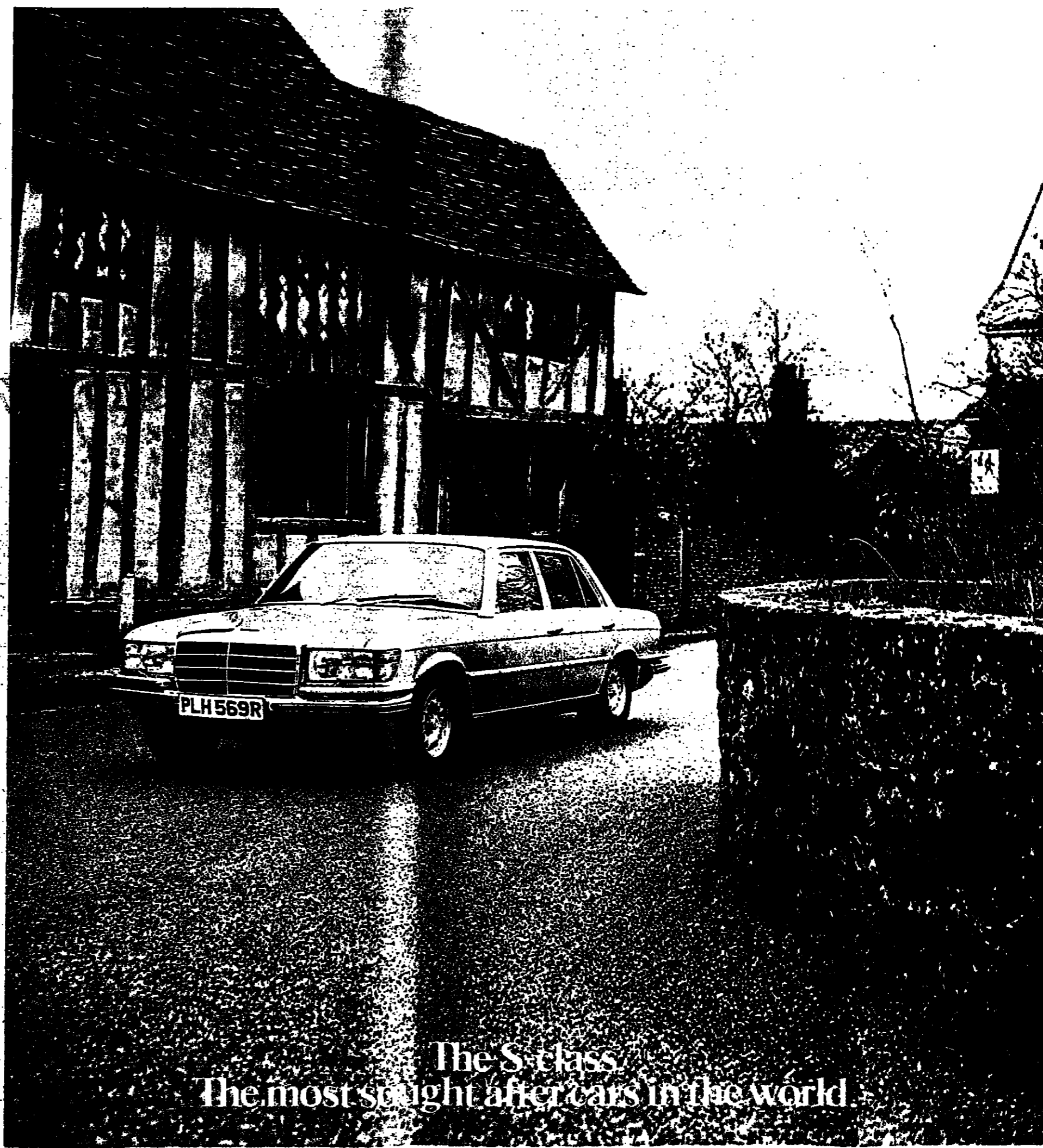
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June 16, 1977



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ever driven, responding quickly and precisely to your every command. You have the choice of five cars, from the 2.8 litre 280SE to the 450SEL 6.9. You can find out why our S-class cars are so sought after around the world, by arranging with your nearest dealer to test drive one for yourself. Mercedes-Benz. The way every car should be built.



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INTERNATIONAL FINANCIAL AND COMPANY NEWS

Row brews over threat of Italian steel plan

PAUL BETTS
JOR POLITICAL row has broken out in Italy following the announcement that a working party...
is controlled by the State through IRI subsidiaries like Finisider and Italsider.

ALASKAN AIRLINES

Talking takeover turkey

BY ART GARCIA, RECENTLY IN ALASKA

WHILE MOST of the attention focuses on the ground with completion of the Alaska pipeline...
of directors to reject the bid merger proposal would make second time in six years. Alaska Airlines, however, reported a loss of \$550,000 in the 1977 first quarter on revenues of \$14.1m.

Merrill Lynch hot up bank competition

By Jurek Martin
NEW YORK, June 21.
MERRILL LYNCH, Pierce, Fenner and Smith today announced the details of an original form of brokerage account...
The new scheme, in the view of Mr. Donald Rent, Merrill Lynch's chairman, "will enable investors for the first time to have convenient and instant access to all their money, investments and ready sources of liquidity."

CS maintains profit margins

RICHARD ROLFE
AL COLD Storage (ICS), which Old Mutual and its joint trust associate Comfund are the largest shareholders, showed growth in real last year, according to the report.

GERMAN COMPANIES

Orders rise by 40% at Hochtief

BY GUY HAWTIN
THE WEST GERMAN construction industry is still comfortably offsetting the continued recession...
Orders rose by 40% at Hochtief, the West German construction giant, in the first five months of this year.

OK Bazaars sales expand

BY OUR OWN CORRESPONDENT
JOHANNESBURG, June 21.
OK BAZAARS, the biggest retailer in South Africa, pushed turnover up to R590m in the year to March 31, and accounted for 7.5 per cent of total retail sales in the Republic of R6.9bn.

Unilever Meat cutback

MICHAEL VAN OS
AMSTERDAM, June 21.
MANAGEMENT of Unilever proposes a considerable cutback in activities to structure problems and work councils and to have received solutions...
The Dutch trade unions have meanwhile been asked by their members at the Unilever NV group meeting to open discussions on the reorganisation proposals unless the companies could guarantee that the 1,800 or so threatened employees could be offered alternative employment in the company.

IPC sells Dutch publisher

BY OUR OWN CORRESPONDENT
AMSTERDAM, June 21.
INTERNATIONAL Publishing Corp. (IPC), of London, is selling its 40 per cent interest in the Dutch publishing company Misset to Elsevier, the Dutch publishing group which already owned 60 per cent of the company.

st-Brocades warning

BY OUR OWN CORRESPONDENT
AMSTERDAM, June 21.
COCADES, the leading Dutch producer of industrial and consumer products, is company expects a further extension about this year's results of its production range in the first quarter which has ensured a "distinct" rise in sales facilities are available now, following acquisitions in the U.S. preliminary prospectus and France.

Allianz lifts profits

ALLIANZ VERSICHERUNGSGES. West Germany's largest insurance group has reported a worthwhile increase in profits despite a substantial increase in claims. Shareholders are being recommended to change a dividend of 18 per cent, and, once again, a 2 per cent bonus.

Varning from Kredietbank chief

AVID BUCHAN
FINANCIAL State control concession by Premier Leo Tinbergen banking sector demands to his new Socialist ally gone too far has coalition partners.

Propafilm to commence production

BY DAVID BUCHAN
BRUSSELS, June 21.
THE JOINT VENTURE, under the name of Propafilm, between the name of Propafilm, between UCB, the Belgian chemical and film group (45 per cent), is to begin production at Ghent of polypropylene film for the food packaging industry in October.

Dutch State tender offer

BY JEFFREY BROWN
THE DUTCH State plans to issue a F1,300m loan by tender. The offering is a 10-year maturity carrying a coupon of 8 per cent. It will be priced next Tuesday and is likely to be set at between 99 and par.

New Brunswick to raise \$50m

THE PROVINCE of New Brunswick plans to issue \$50m notes due 1984 in the bond market. The coupon is expected to be 8 per cent, and in current market conditions the notes are expected to be priced at a discount, writes Francis Ghiles.

SELECTED EURODOLLAR BOND PRICES MID-DAY INDICATIONS

Table with columns for bond types (e.g., STRAIGHTS, CONVERTIBLES), maturities, and prices. Includes entries for various international bonds like Alcan Australia, BHP, and others.

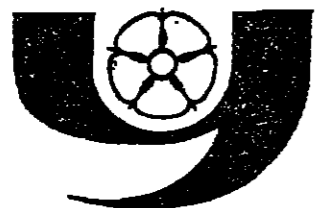
BONDTRADER INDEX

Table showing bond market indices for various regions: London (102.67), New York (102.67), and Convertible (110.42).

FINANCIAL TIMES REPORT

Wednesday June 22 1977

Friendliness. We built a bank on it.



Yorkshire Bank

Weatheralls Industrials

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JOINT AGENTS: Howell, Brooks & Partners

West Yorkshire

As the third largest English county, West Yorkshire is grappling with administrative problems connected with its sheer size. But in its search for solutions to problems like unemployment and urban renewal it can rely on important advantages such as good communications, natural assets and hard-working people.

Faith in its future

AS THIS report is being read, 50 industrialists will be flying to West Yorkshire from Heathrow. They are the guests of the county council and will be shown round the county, bombarded with facts and figures and that particularly Yorkshire brand of smooth talking called "the gift of the gab" in order to persuade them to invest in the county.

Hosting the party for the first time as council leader will be Mr. Tom Batty, whose Tory colleagues won control of the council in a landslide victory in May and swept out the Labour Party, which had been in power since the new council was set up.

When you talk to people in West Yorkshire, they don't seem to care much about the change. The man in the street still thinks that two-tier local government is a disaster. ("We've had it for four years and I'm still looking for the rates office," grumbled a spectator to me at a Bradford League cricket match the other Saturday).

But there is a general feeling

that the Tories have started well. They promised more "open local government" and started their reign by throwing open sub-committees as well as committees to Press and public. They believe this will work for their good. They are to "pare-down" the Labour-introduced consumer advice service and Mr. Batty told me they have no intention of implementing Labour's plan to buy, as a council, interests in local industry.

They were faced with the usual problems of such a change of control. They have a lot of new councillors without administrative experience at metropolitan county level. But Mr. Batty says they are a talented lot and will not take long to get into the way of things.

Preference

Most West Yorkshire businessmen are pleased. Apart from their general preference for a Tory administration, they now feel more will be done about town centre parking, an issue which led to "nearly open war" between some districts and the Labour controllers at Wakefield. Labour policy was to push the county's excellent and efficient public transport services, which include some subsidised commuter railway lines. Businessmen claimed there were insufficient short-term parking facilities for what Yorkshire still calls "the commercial man" and it now looks as if this lack may be remedied.

But if town centre parking were the only problem facing West Yorkshire, its new masters would be sitting back with smiles on their faces. There is unemployment too—and just

how blurred is the picture of the future shows up in two wide-ranging alternative forecasts in the county council's interim report on its structure plan.

Green favourable national growth, with the country maintaining its position in world markets, West Yorkshire expects an increase of more than 25,000 jobs up to 1986. But assuming a low level of growth, there would be a loss of 83,000 jobs.

vision of prosperity—though it may be doubtful. Mr. Batty mentioned in the unemployment black spots in the county, areas out on the moors that stretch from Halifax to the Lancashire border and in the south of the county where coalmining was once prosperous.

"One of the troubles is that there is no tradition of commuting here," he said, "and I don't believe it can come in the

This Report was written
by ALAN FORREST



West Yorkshire's new leaders have a vast county to administer. It covers 787 square miles, extending from Todmorden (the little town that was once in Yorkshire for local government, but in Lancashire for addressing letters) to Knottingley in the east. It is a population of just over 2m, and is the third largest of the 43 English counties.

It is certainly looking a pleasant place to live in. The old centres of Bradford, Leeds and Halifax have been cleaned up, shopping goes from strength to strength and everybody says it would have been a paradise if it had not been for the recession.

People returning to West Yorkshire after a long absence cannot find their way round the old industrial centres, and complain. But the people like them certainly Bradford, a night in the early days of re-planning with its bulldozers and more vacant sites, now looks almost beautiful, a space age city with its catwalks and subways. You almost expect to see moving pavements.

To walk around Bradford, Leeds and Halifax is to get a fractious

fore-seable future. You can only have commuting when you have a public transport system like London — we could not supply the sort of interchanges needed, excellent though our public transport system is.

But local authorities do what they can. Bradford has a bus shuttle service between a large council housing complex and Euroways, one of its big industrial estates, which has vacant sites and is complete with a hotel of the French Novotel group and almost instant links with the motorway into Lancashire.

It has the problems common to all old manufacturing areas. The rundown of jobs in the wool textile industry has been a source of worry to the county's workforce. Bradford, Huddersfield, Dewsbury and Batley are all old textile towns, though their constant search for more diversity has been far-sighted and there has never been the threat of any one of them turning into an inland Jarro.

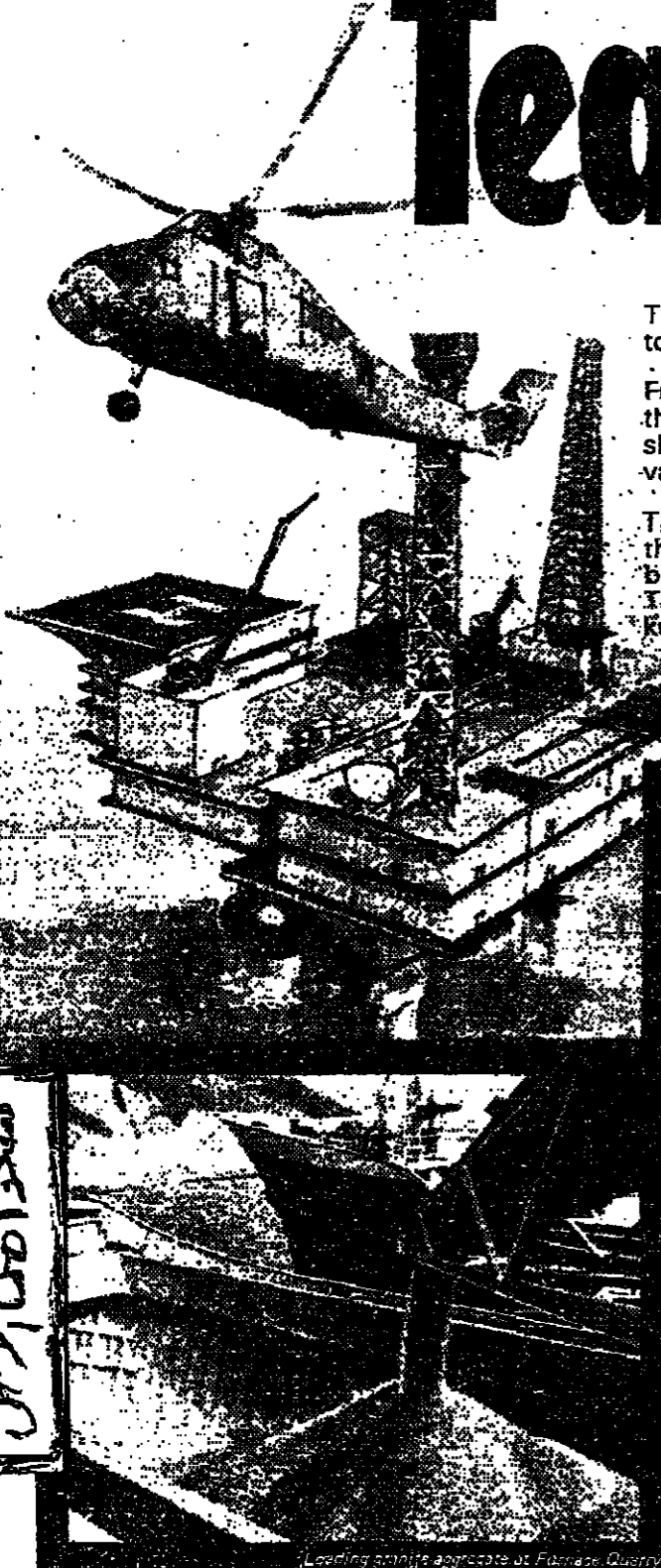
West Yorkshire has lost most of its mining. Even the Pontefract liquorice sweetmaking

industry isn't what it was—businessmen a the famous liquorice fields are taken not just to see finished and the liquorice is imported already processed in After all, it is argued tanks. But the area has kept where a worker can high in the industrial league lunchtime sandwiches with its engineering, chemicals open moor, or his and plastics (ICI is well-established in the Kirkstall district).

The county's leaders are not making any rash speculations about the future. Mr. Batty feels county. Some of the there won't be a lot of footloose a few years ago—Y jobs, in the near future, and, shire is going to be like most local government county of Britain—w leaders in the north, has his stop us—are not worries about the threat of a But there is still a tr devaluation in Scotland to indus amount of local pri development investment in the old English manufacturing match said. "We t areas." But I don't think were out of the w devaluation is going to happen, years ago when we he added with a fair amount of new buildings and confidence.

The county's best selling had it made. Well, point—apart from its good wrong, but things will history of labour relations—is and we're not going its scenery. That is why visit-bloody wrong."

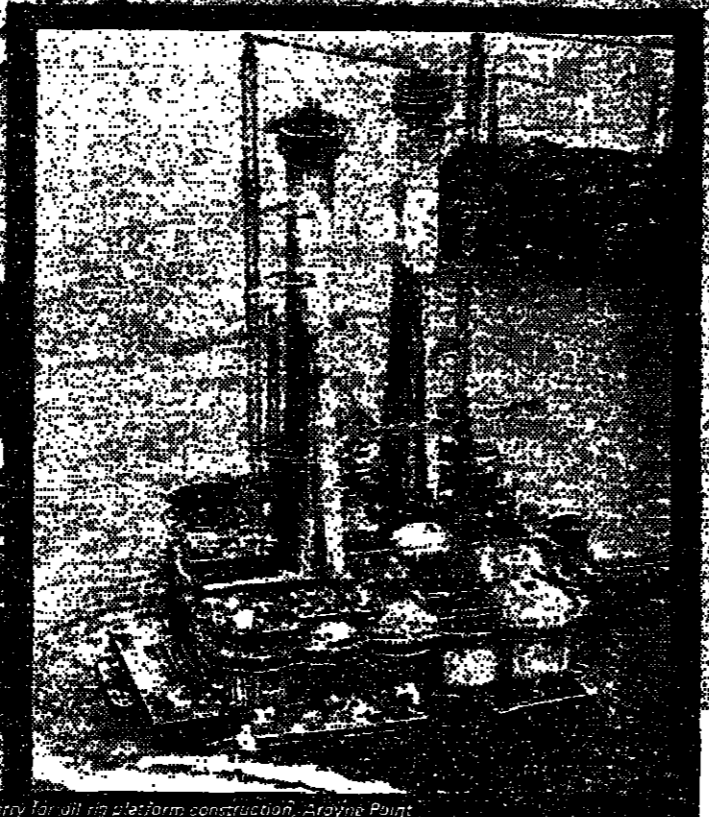
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The moors and curlew never far away

WHEN JAZZMAN Graham Collier wrote a "Suite with Words" based on J. B. Priestley's writings, for a Bradford arts festival, he called it Smoke Blackened Walls and Curlews. The title sums up the spirit and landscape of West Yorkshire.

Not that there are many smoke-blackened walls left. Town centres have been cleaned up and torn apart. Smokeless zones have made the county a better place to live and work in. But the curlews and the high moors remain.

West Yorkshire people have always been proud of the greenery on their cities' doorsteps. They have been rather slow in realising that it might bring in the tourists. But things are moving.

The success of neighbouring Northumbria in developing its links with a Scandinavian past and attracting vast crowds of Norwegian shoppers to Newcastle, Durham and Middlesbrough, has not gone unnoticed. West Yorkshire has centres with cheap and efficient leisure activities, fast and subsidised public transport and a countryside that contradicts the "dark Satanic mills" image.

"It is a forgotten world anxiously awaiting to be rediscovered and explored," a county council document on tourist potential says.

As its biggest tourist garner, the county has the Bronte Country. On a bleak rain-racked day recently, Haworth, the village where the sisters lived and worked, was thronged with Japanese, Americans, Dutch and Germans. High on the moors, at the inns, they were queuing for huge "ploughman's lunches" which would put any London pub to shame.

A dripping local wiped his face with a copy of the Kelghley News and said: "This is the sort of weather that brings 'em in. They're expecting to see Heathcliffe at every corner." Bradford, the metropolitan district that embraces Haworth, is hoping to cash in further on the lure of the Brontes. It has plans for Bronte workshops for students and others during holidays, with accommodation at the various college hostels in the district.

Out at Wuthering Heights, a

few miles across the moor, the only worry is that the tourists might cart it away brick by brick—a problem being faced at Hadrian's Wall and Stonehenge.

Areas of West Yorkshire not usually associated with the holiday trade were given a boost by TV series such as Champion House and Hadleigh. Industrial archaeology is a fast-growing pastime (the sarcasm which greeted the "Come to Rotherham" publicity of four years ago is forgotten). The upper reaches of Calderdale, which stretches out over the moors to the Lancashire border with Halifax as its centre, is attracting the customers.

The Jewel in West Yorkshire's crown—this is the county council's phrase, not mine—is Ilkley, the little town on the moors which Yorkshiremen sing about. It is establishing itself as a conference and festival centre.

Festival

Its two-yearly literature festival ended recently. It brought in "stars" like Lord David Cecil and Mervyn Bragg. Merseyside poets and Birmingham pop stars and took over £1,000 at a children's book exhibition in a school at Ben Rhydding, the Bradford woolbroker belt.

Ilkley's fame is growing. Prince Charles uses it for quiet week-ends. Television man Donald Baverstock has settled there. It has attracted "long distance commuters" — John Carbery, for instance, drama head at the nearby Bingley Training College, commutes between the area and Blackheath and finds it an enjoyable life.

The area is a long way in spirit from the "soulless north" of Coronation Street. You meet somebody like John Normanton, a wool merchant, but also a poet and a painter, or Geoff Oldham, who doubles the job of chief executive of the Clothing Industry Training Board with acting at Ilkley Playhouse.

There is still much to complain about in West Yorkshire. There are patches of Leeds and Bradford which remain monuments to the Industrial Revolution, noise and decay. Local

government economies have made it unlikely anything will be done in the near future.

But the county's big attraction to visitors and incoming industrialists is its excellent communications.

The motorway link between Liverpool and Hull is now complete. There are almost hourly trains to London, with the best roast beef and Yorkshire pudding on the whole of BR in the dining cars. Some commuter lines are county council-subsidised and county planners are confident the Leeds-Bradford Airport will get its extended runway for jumbo jets. Thomson Holidays' experience of holiday flights to Spain from the airport may give plans a boost.

West Yorkshire has always been in the forefront of the arts. The image of brass bands and 1,000 Messiahs every Christmas is only part of the story. Leeds and Bradford both have local authority-managed theatres, the Leeds Triennial Musical Festival brings the best of choral music to the county, great choirs like the Huddersfield Choral Society help the musical scene (which they're not appearing at Salzburn) and the various fringe theatres springing up around the

university and the city giving a new boost to the area.

One thing the established locals deplore is the drift of life away from centres. Leeds and with their fine new precincts, are a great shopping hours. Di of the new pubs a people still prefer to to the country evenings.

Reluctance

For whatever count say about the relict West Yorkshiremen to for work, they seem willing to commute i The picture of w life in Leeds drawn i Huggart more than i any seems a million r in spite of to-day's b

The worries about are still there, but i at Harry Ramden's ally-famous fish and at Guiseley don't s worrying too much. can still find real pe you have to look f there is optimism, i people who tell you springing up around the is yet to come.

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Tel (0532) 463000

A task for industry

AD the local Press and the talk in the streets and pubs, it is hard to get a realistic view of West Yorkshire's industrial outlook. The Burton group, once part of the Leeds wool-textile industry, reports indications in other localities and the worries about competition of Bradford tube industry just add burdens of an area which is more than its share. There are bright spots, growth of service industries given a transfusion of money, particularly in demand for women's National companies as Hambro Life and Bank have set up headquarters in Leeds and the area's share of civil service, such as the big new Revenue centre at Ship-little town at the edge of the Bradford urban district. But with a change in White-tides towards moving jobs out of London, in West Yorkshire are ing where future growth

for Burton. Parliament saw the storm-clouds ahead, built up a flourishing export trade and is one of the strongest businesses in the industry. Old wool-textile workers listen to their leaders' success and ask: "But will it all mean more jobs?" Many trade leaders admit honestly that there is not a great opportunity for labour growth. All they can guarantee is that the big rundown of jobs in wool textiles, which caused near panic in the area some years ago, has been halted. This has been done by rationalisation and mergers and more efficient modern machinery. It has changed the face of the industry

Engineering

But West Yorkshire is much more than textiles. It has huge engineering works. English Electric and Hepworth and Grandage at Bradford, the big Crompton Parkinson factory at Guiseley, developed from a back street engineering shop before World War I by the brothers Frank and Albert Parkinson. Leeds is a world centre of the printing machine industry and House of Algray, the printing plate makers, already established in the city, is believed to have plans to bring its entire national operation there shortly. A local planner told me: "We know the chances of attracting entirely new industry to the area are not as bright as they were, but we believe a lot can be done in helping companies already established here to expand. We have the land for the factories and we can certainly supply the skilled labour."

Companies which have established themselves in the county all seem highly satisfied. Officials talk of the good pool of skills and the almost flawless labour relations record when compared with areas like Merseyside and the Midlands. For example, the Frigoscandia group set up the biggest cold store in Europe at South Kirkby, a former mining area near Wakefield in 1971. They report: "Employee-management relations have been first-class and everyone has taken an active part in developing the complex."

Another foreign group is Cameron Ironworks, the Texas-based international company which now manufactures oilfield equipment at Stourton, near Leeds. It has never known an all-out strike. "Your Yorkshire people and the Texans have a lot in common," one of the American managers says. "It is hard to cover the vast canvas of West Yorkshire industry without missing some household name. At Calderdale district, they claim to manufacture everything from doorstep customers. Spicats eyes (a Halifax man's invention) to cash registers, from d and Huddersfield asphalt to wire and top-quality used to complain: "We carpets in an area which is more than half rural land. Kirklees is the centre of worsted cloth. But the two small towns of Dewsbury and Batley are the home of some of the world's most famous blanket makers because of manufacturers and the centre of the shoddy (re-processed wool) industry. But they now house a tailoring industry, from the multiple of Parkland Manufacturing in Bradford, does make sports equipment. In the days of the cheap chemicals, tentage and furniture mainly making cloth



The Merrion Centre, a new shopping complex in Leeds

Planners know the future lies in increasing the area's diversity. In the older pubs you find a few people bemoaning the passing of the wool industry's peak as a labour-provider. "There aren't any characters left in the trade," they say and look back nostalgically to the day when the Wool Exchange was packed with hard-headed men in overcoats that looked as if they had been made in a shipyard, when God was in his Heaven and the Wool Record was a weekly and not a monthly. The more intelligent eyes are on the future. Planners are hoping to fill those empty offices and point out that rentals are among the most competitive in the country. One sore point with many people in the districts is the way they claim that Leeds has hogged the lion's share of the office accommodation. "There is no doubt," one local businessman said, "that some national organisations do want to come to Leeds, and perhaps not to, say, Halifax or Huddersfield. But you can't deny that Leeds is a great regional centre which provides everything a commercial undertaking needs."

There is a general opinion that Leeds can pretty well look after itself. The real problem areas are some of the older villages on the outer fringes of Kirklees and Calderdale. The county council's recent interim report on its structure plan discussed the declining economic base of the Upper Calder and Colne Valleys. These areas, the report says—above Sowerby Bridge and west of Huddersfield—have suffered from loss of population, a deterioration in the level and quality of facilities and consequently poor environment. People leaving the areas, the report goes on, tend to be from the younger age groups, which has resulted in labour shortages discouraging industrial expansion and private investment.

Brighter news for the area is shown by a steady recovery of the industrial property market in the first few months of this year. The County Council reports: "A rapid recovery of inquiries and lettings in all areas occurred, with the demand for freehold property for small

and medium-sized companies in Leeds particularly marked." There is no doubt that a huge task lies before West Yorkshire's new masters. Having said publicly that it believes the contraction of the textile industry is at the root of the county's decay, the county is determined to stop the rot.



Centre of life in York

York is an ideal headquarters for Yorkshire-General, the Life Company of General Accident; it is an excellent centre of communications particularly for a company with a field force covering the whole of the United Kingdom. The help and advice of these specialists in life assurance and pension scheme matters is freely available through the many branch offices of General Accident.

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imistic

ough the actual percentages from one section to nearly 50 per cent. of industry's total output is being exported compared traditional average of 30 per cent. Stretching hmetic a little further, port earnings are now out at 25,000 a year of our labour force. textile trade chiefs are y optimistic. They pour the multiple tailoring talk about the decline British suit. "That's just for bad management," y, and point to the re-growth of the British international fashion. would have thought that ndown of the Leeds industry would have household cold wind through the uring textile areas. For ds factories were 'he oorstep customers. Spi-cats eyes (a Halifax man's ind manufacturers in-vention) to cash registers, from d and Huddersfield asphalt to wire and top-quality used to complain: "We carpets in an area which is more than half rural land. Kirklees is the centre of worsted cloth. But the two small towns of Dewsbury and Batley are the home of some of the world's most famous blanket makers because of manufacturers and the centre of the shoddy (re-processed wool) industry. But they now house a tailoring industry, from the multiple of Parkland Manufacturing in Bradford, does make sports equipment. In the days of the cheap chemicals, tentage and furniture mainly making cloth



To measure our quality internationally just feel our width.

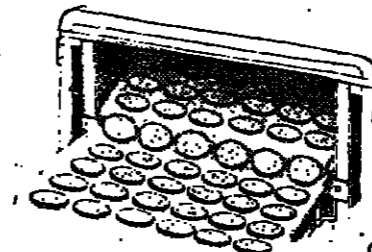
When you look at the wide range of products encompassed by BBA Group, and the demand for them by industries all over the world, it's easy to see how we have won our reputation for being one of Britain's most successful traders in overseas markets.

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The new Ford 'Fiesta' which is to be produced in England, Germany and Spain, will be fitted with disc brake pads and brake linings supplied by BBA Group companies.



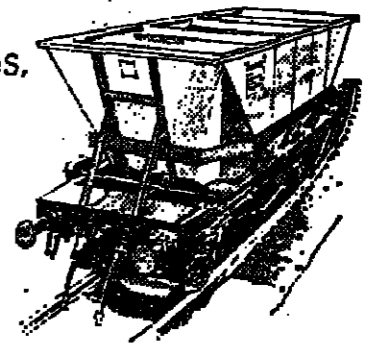
Conveyor belting Scandura Limited, another BBA Group company, are leading manufacturers of conveyor belting fit for

anything, from the tough carriage of coal and aggregates to the delicate but high temperatured processes of biscuit baking. Not only on home ground but in export markets like Nova Scotia, Chile, China. In the USA, too, Scandura Inc. produces a uniquely tough belting for the mining and other industries of North America.

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Yorkshire Who?"

"Yorkshire Chemicals! So they make dyes and things for textiles and leathers. Don't get technical, please. Are they responsible for all those super colours in man-made fibres and the soft tones and textures in real leather? And I thought it had nothing to do with me!"



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Index up another 4 in 29m. volume + FOREIGN EXCHANGES

Index up another 4 in 29m. volume + FOREIGN EXCHANGES

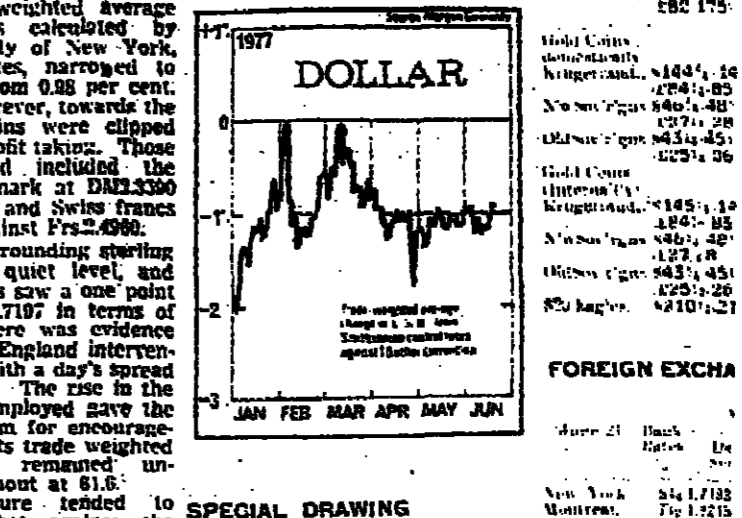
BY OUR WALL STREET CORRESPONDENT

NEW YORK, June 21

THE ADVANCE continued on Wall Street today, although the close was below the best in the heaviest trading in two months. The Dow Jones Industrial Average finished a further 4.33 up at 928.60 and the NYSE All Common Index gained another 19 cents to 855.90, while rises led falls by \$70 to \$80. Trading volume sharply expanded 6.7m. shares to 29.73m.

Utilities put on 0.43 to 160.74. Banks 0.71 to 236.84 and Papers 1.10 to 88.40. Good Corporate profits, the possibility of rises in oil prices and anticipated exploration incentives contributed to Oil and Gas shares strength. Trecos added 80 cents to 53.1. Canadian Occidental Petroleum \$1 to \$13 and Dofasco "A" \$1 to \$23. PARIS—Mixed in calm trading. Banks, Hotels, Printings and Stores fell, while Properties, Real Estate Investments and Industrials rose. Foods and Metals were irregular. Oils gained slightly, while Chemicals were virtually unchanged. Americans and International Oils firmed, Germans dipped. Canadians were irregular, while Golds and Coppers eased. BRUSSELS—Stocks rose a little in moderate trading. Steels were higher. Electrics also improved, while Metals were less in demand. Chemicals and Holdings improved. Dutchers were off in an outburst, European Banks were steady, while leading Industrials were mixed. Dollar stocks were firmer. Dutch issues barely steady, while German shares were little changed. OSLO—Bankings and Insurances were slightly easier, while Industrials held quiet steady.

VIENNA—Narrowly mixed in quiet trading. COPENHAGEN—Lower in moderate dealings. MILAN—Stocks firmed in slightly more active trading. BOSTON—Gained 1.50 to 153.00. The Dow Jones Industrial Average finished a further 4.33 up at 928.60 and the NYSE All Common Index gained another 19 cents to 855.90, while rises led falls by \$70 to \$80. Trading volume sharply expanded 6.7m. shares to 29.73m.



TUESDAY'S ACTIVE STOCKS table with columns for Stock, Closing, Change, and Volume.

OTHER MARKETS Canada strengthened Canadian stock markets strengthened further in increased activity yesterday. The Metals and Minerals Index advanced 10.4 to 1,076.7. Crude Oil rose to 65.5 and Oil and Gas 9.4 to 177.2.

STOCKS TO WATCH: American Telephone & Telegraph, General Electric, International Business Machines, and others.

SPECIAL DRAWING RIGHTS RATES table with columns for Stock, Rate, and Date.

Indices

NEW YORK - DOW JONES table with columns for Date, High, Low, and Change.

MONTEREAL, TORONTO, JOHANNESBURG tables with columns for Date, High, Low, and Change.

Y.S.E. ALL COMMON table with columns for Date, High, Low, and Change.

EXCHANGE CROSS-RATES table with columns for City, Rate, and Date.

STANDARD AND POORS table with columns for Date, High, Low, and Change.

Investment premiums table with columns for Stock, Premium, and Date.

CANADA table with columns for Stock, Price, and Change.

EURO-CURRENCY INTEREST RATES table with columns for Term, Rate, and Date.

OVERSEAS SHARE INFORMATION

Large table of overseas share information with columns for Stock, Price, and Change, covering various international markets.

ARMING AND RAW MATERIALS

India fixes maximum price

Our Own Correspondent
JUTE Commissioner has a maximum price of a quintal for WS grade...

Summer chill slows down fruit and salad sales

BY OUR COMMODITIES STAFF

CLOUDY, chilly weather over much of Britain has killed the consumers' seasonal appetite for soft fruits and salads...

Strawberries are relatively expensive, however, mainly because of the canning, freezing and jam making industries...

'Subsidy cuts hit milk sales'

Financial Times Reporter

DOMESTIC milk consumption in the U.K. has fallen by almost 700,000 pints a day...

BRAZILIAN COCOA

Crop damage fears prove unfounded

BY SUE BRANFORD

WITH HARVESTING now well underway, traders in Salvador are putting Brazil's tempo...

Some traders believe the growth in grinding capacity has been orderly and excessively rapid...

BRAZIL'S EXPORTS OF COCOA BEANS AND COCOA PRODUCTS, 1969-1977

Table with columns for Year, Beans (Metric Tons), Products (Metric Tons), and Total (Metric Tons) for 1969/73, 1974, 1975, and 1976.

has imposed quotas on the tempo crop of the first 2.0m. bags, 900,000 go to both the exporters and the grinders...

tar rise in cocoa market

Richard Mooney
A FUTURES prices rose yesterday with the Sep position on the London market closing 293.5...

EEC 'ice cream' rule opposed

BY ROBIN REEVES

BRITAIN CONTINUED to block a European Commission plan to limit the name 'ice cream'...

But the Government was opposed on principle to trying to solve the problem of dairy surplus—the aim is to increase total EEC butter fat consumption...

Copper talks inconclusive

PARIS, June 21

THE Inter-governmental Council of Copper Exporting Countries Ministerial meeting ended without taking action on copper prices...

Canadian wheat and U.S. corn need rain

BY OUR COMMODITIES STAFF

CANADA will harvest 17m. Food Conference. But yesterday's reports from the Canadian grain lands showed...

production in the central part of the cornbelt. Speaking in Manila, Mr. Bob Bergland, U.S. Agriculture Secretary, confirmed...

COMMODITY MARKET REPORTS AND PRICES

Table with multiple columns for various commodities including Metals, Wheat, Soybeans, and other agricultural products, listing prices and changes.

SOYBEAN MEAL PRICE CHANGES

Table showing price changes for Soybean Meal, including columns for Date, Price, and Change.

U.S. Markets

Table showing U.S. Market prices for Soybeans, Copper, and other commodities.

A WELL KNOWN CITY BANKING HOUSE. Services to widen its commodity interests and would welcome discussions with established commodity trading companies.

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With your help we've already saved more than 100,000 lives. But a new lifeboat now costs more than £100,000 thousands to maintain. For as little as £3 a year you can join Shoreline.

SILVER. Silver was fixed 1.50 an ounce higher for spot delivery in the London market yesterday at 297.75.

COFFEE. In sympathy with New York, London opened 500 higher, reports Dribble.

MEAT/VEGETABLES. MEAT COMMISSION—Average fatstock price at representative markets June 21.

WOOL FUTURES. Australian Wool (Pence per kilo). July 1977: 225.00 (+2.00).

RUBBER. SLIGHTLY STRAIGHTER opening in London physical market. Dribble lower during the day.

JUTE. JUTE—Firm, but quiet. Prices in U.K. and U.S. are unchanged.

GRAINS. WHEAT—FIRMER (GAFTA)—Market opened a strong higher and was mostly well bid by commercial sources.

FINANCIAL TIMES. REUTERS. DOW JONES. MOODY'S. Tables showing financial data and market indices.

Japan to cut wool imports. JAPAN'S RAW wool imports will fall to about 1.5m. bales, including 1.3m. from Australia.

STOCK EXCHANGE REPORT
Special situations again to the fore in subdued trade
Share index reacts 3.2 to 442.0—Gilts a shade harder

Account Dealing Dates
Option
*First Declara- Last Account
Dealing Dates Dealings Day
May 23 Jun. 9 Jun. 10 Jun. 21
Jun. 13 Jun. 23 Jun. 24 July 5
Jun. 27 July 7 July 8 July 19

Overnight firmness in the equity
leaders was maintained at yester-
day's start but only briefly
because it soon became evident
that potential buyers were still
holding off pending a more settled
background in the political field.

The miscellaneous industrial
leaders passed a rather quiet and
uninteresting session with final
quotations showing little altera-
tion. Pilkington at 37p, how-
ever, gave up 7 of the previous
day's rise of 17 as buying interest
petered out. Elsewhere, White-
croft continued to reflect satisfac-
tion with the preliminary results
and put on 5 to 15p for a two-
day gain of 12, but disappointment
prompted a fall of 7 to 18p in
J. H. Fenner. Carlton Industries
were in demand at 14p up a
shilling Abbey firming 4 more to
27p and AAB were similarly
better at 15p. Awaiting news of
the bid approach, Redfearn
National Glass improved 3 to
18p. Powell Dudley, up 5 to
18p, reflected satisfaction with
the preliminary results and the
statement on prospects for the
current year's trading. Bessy and
Bawkes, up 2 to 15p, continued to
attract buyers, but Wm. Baird
eased 2 to 13p following the
proposed rights issue. MR
Refrigeration put on 3 to a fresh
high for the year of 12p and
Norecor were similarly better at
87p. Among smaller-priced issues,
Geo. Wills improved 1 to 34p and
R. S. and W. Whiteley 2 to 24p.

FINANCIAL TIMES STOCK IN
Government Secs 67.81 67.70 67.96 67.88 68.02
Fixed Interest 67.93 67.76 67.87 67.77 68.51
Industrial Ordinary 442.0 442.2 441.6 442.5 450.1

HIGHS AND LOWS S.E.
Gilt Secs 71.48 64.85 147.4 48.18
Fixed Int 71.19 60.40 188.4 50.53
Ind. Ord 472.1 472.6 543.9 49.4

ACTIVE STOCKS
Stock Denomina- Closing Change
tion marks price (p) on day
Borelays Bank 11 12 394 -1

NEW HIGHS AND LOWS FOR
The following securities noted in the
Financial Times Stock Index yesterday
showed new highs and lows for 1977.

ALLIED BREWERIES LIMITED
INTERIM ANNOUNCEMENT OF
PROFIT AND DIVIDEND
FOR THE 32 WEEKS ENDED 7 MAY 1977
The results for the 32 weeks ended 7 May 1977 based on unaudited
figures prepared for management purposes are shown below.

Turnover 668.8 505.7 885.3
Trading surplus before depreciation 59.7 45.0 90.4
Deduct: Depreciation 13.9 11.7 19.7
Trading profit 45.8 33.3 70.7
Investment income 2.8 2.6 4.0
Associated companies 1.0 0.8 2.0

RECENT ISSUES
EQUITIES
FIXED INTEREST STOCKS
"RIGHTS" OFFERS

FT—ACTUARIES SHARE INDIC
These indices are the joint compilation of the Financial Times, the Institute
and the Faculty of Actuaries
EQUITY GROUPS
Tues., June 21, 1977
Mon. June 20 Fri. June 17 Thur. June 16

DEALING DATES
First Last Set-
Deal- Deal- Decla- For
ings ings tion ment
May 31 Jun. 20 Sep. 1 Sep. 15
Jun. 21 July 4 Sep. 15 Sep. 27
July 5 July 18 Sep. 29 Oct. 11

AUTHORISED UNIT TRUSTS

Table listing various unit trusts such as Brown Shipley & Co. Ltd., Guardian Royal Ex. Unit Mgrs. Ltd., and others, with columns for fund names, managers, and performance metrics.

OFFSHORE AND OVERSEAS FUNDS

Table listing offshore and overseas funds including Kemp-Gee Management Jersey Ltd., Fidelity Mgmt. & Res. (Bermuda) Ltd., and others, with columns for fund names, managers, and performance metrics.

BASE LENDING RATES table listing various banks and their respective lending rates for different terms and currencies.

Table listing various unit trusts and funds, including Midland Bank Group, Sun Alliance Fund Mgmt. Ltd., and others, with columns for fund names and managers.

INSURANCE, PROPERTY, BONDS

Large table listing insurance, property, and bond products from various companies like Abbey Life Assurance Co. Ltd., Equitry & Law Life Ass. Soc. Ltd., and others, with columns for product names and details.

ISTORY TODAY advertisement featuring 'The Jubilee Number June 1977' and 'Queen Victoria's Jubilees' by Joanna Richardson, with a price of 50p.

Table listing various unit trusts and funds, including National Provident Ins. Mgrs. Ltd., and others, with columns for fund names and managers.

CLIVE INVESTMENTS LIMITED advertisement listing services like Royal Exchange Ave., London EC3V 3LU, and providing contact information.

INSURANCE BASE RATES table listing various insurance products and their corresponding base rates.

FT SHARE INFORMATION SERVICE

CHRISTIE & CO. Special lists in the sale of privately owned businesses & companies. VALUERS & LICENSED DEALERS.

BRIEF FUND

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various fund shares.

CANADIANS. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists Canadian stocks.

BUILDING INDUSTRY—Continued. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists building industry stocks.

DRAPERY AND STORES—Continued. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists drapery and stores stocks.

ENGINEERING—Continued. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists engineering stocks.

BANKS AND HIRE PURCHASE

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists bank and hire purchase stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

ELECTRICAL AND RADIO. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists electrical and radio stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

INTERNATIONAL BANK

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists international bank stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

CHEMICALS, PLASTICS. Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists chemical and plastic stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

CORPORATION LOANS

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists corporation loans.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

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Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

COMMONWEALTH & AFRICAN LOANS

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists commonwealth and African loans.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

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Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

BEERS, WINES AND SPIRITS

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists beer, wine, and spirit stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

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Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

FOREIGN BONDS & RAILS

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists foreign bonds and rails.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

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Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

AMERICANS

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists American stocks.

Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

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Table with columns: High, Low, Stock, Price, Div. Yield, etc. Lists various stocks.

S.E. List Premium 40% based on \$1.194 per share

Conversion factor 0.795 (0.795)

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INDUSTRIALS—Continued

Table of industrial stocks including companies like British Leyland, Ford, and various engineering firms.

MOTORS, AIRCRAFT TRADES

Table of stocks in the motors and aircraft trades sector, including companies like British Leyland and various engine manufacturers.

PROPERTY—Continued

Table of property-related stocks and investment trusts.

TRUSTS—Continued

Table of various investment trusts.

SHIPPERS, REPAIRERS

Table of stocks in the shipping and repair sectors.

SHIPPING

Table of shipping-related stocks.

SHOES AND LEATHER

Table of stocks in the shoes and leather industry.

SOUTH AFRICANS

Table of stocks from South Africa.

TEXTILES

Table of stocks in the textile industry.

PAPER, PRINTING, ADVERTISING

Table of stocks in the paper, printing, and advertising sectors.

PROPERTY

Table of property-related stocks.

TOBACCO

Table of stocks in the tobacco industry.

TRUSTS, FINANCE, LAND

Table of investment trusts, finance, and land-related stocks.

INSURANCE

Table of insurance-related stocks.

TRUSTS—Continued

Continuation of investment trusts table.

MINES—Continued

Table of mining stocks.

CENTRAL AFRICAN

Table of stocks from Central Africa.

AUSTRALIAN

Table of Australian stocks.

TINS

Table of tin-related stocks.

COPPER

Table of copper-related stocks.

MISCELLANEOUS

Table of miscellaneous stocks.

RUBBERS AND SISALS

Table of rubber and sisal stocks.

TEAS

Table of tea stocks.

INDIA AND BANGLADESH

Table of stocks from India and Bangladesh.

Africa

Table of African stocks.

MINES

Table of mining stocks.

CENTRAL RAND

Table of stocks from the Central Rand.

EASTERN RAND

Table of stocks from the Eastern Rand.

FAR WEST RAND

Table of stocks from the Far West Rand.

O.F.S.

Table of O.F.S. stocks.

FINANCE

Table of finance-related stocks.

DIAMOND AND PLATINUM

Table of diamond and platinum stocks.

DAIWA SECURITIES logo and company name.

International Financial logo and company name.

Notes section with text explaining market conditions and disclaimer.

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FACTORIES AND WAREHOUSES 20% Rent Rebates for Industry Rent Fairview from: 65p PHONE 01-366 1271

We pay for your steel until you need it

Healey and TUC start pay talks

BY ALAN PIKE, LABOUR STAFF

TUC LEADERS last night emerged from the start of formal negotiations with the Government on the shape of pay policy after next month convinced that they are succeeding in holding pay settlements at a responsible level in the coming year.

Common basis This is the position from which the TUC will negotiate in the detailed discussions which are certain to follow yesterday's opening meeting.

Labour paper urges tight grip on multinationals

BY MICHAEL LAFFERTY, CITY STAFF

TOUGHER Government control of foreign-based multinational companies operating in the U.K. and a new foreign investment unit to monitor their activities are the main proposals in a draft paper which will be considered next month by the Labour Party's national executive committee.

It is expected that the paper, prepared by a committee of MPs, party officials and trade unionists under the chairmanship of Mrs. Judith Hart, Minister for Overseas Development, will then be published as a Media Labour Party Green Paper.

At no time did I see any violence offered to the police or any provocation other than verbal provocation. But he alleged, police had pushed into the crowd to drag certain people out.

Mr. Mikardo claimed that the bus taking employees into the plant had been used "like a projectile" to break through the picket line.

Much of yesterday's meeting was taken up by the TUC side presenting their case for the Government action which they believe is needed if they are to succeed in holding pay settlements at a responsible level in the coming year.

Mr. Healey, who was accompanied at yesterday's talks by Mr. Albert Booth, Secretary for Employment, Mr. Eric Varley, Industry Secretary and Mr. Roy Hattersley, Prices Secretary, is still working towards the view that the next stage of pay policy should represent a 10 per cent. earnings increase.

Today the TUC general council is expected to reiterate firmly that the custom of a 12 months gap between pay settlements must be maintained in the next wage round.

There is a distinct if unstated feeling that much still depends on the conference of Britain's largest union—the Transport and General Workers—to be held next month.

Post Office engineers reject curbs, Page 11

Continued from Page 1 Rees promises inquiry

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Mr. Mikardo claimed that the bus taking employees into the plant had been used "like a projectile" to break through the picket line.

Schmidt survives censure vote

By Jonathan Carr

BONN, June 21. CHANCELLOR Helmut Schmidt tonight survived a Parliamentary censure vote—one of a series of efforts by the opposition to split and defeat the Government coalition.

Even if the motion of Censure had been approved, Herr Schmidt would not have been forced under the constitution to step down. This can only be done through a so-called constructive vote of no confidence which, if carried, elects one chancellor and automatically elects a successor.

The opposition has decided to vote en bloc against the defence budget on Thursday, putting the coalition to another tough test.

Continued from Page 1 Unemployment

The register was 362,000, which is 8,000 higher than in the period to April, but 11,000 lower than the average for the three months to mid-September.

At no time did I see any violence offered to the police or any provocation other than verbal provocation. But he alleged, police had pushed into the crowd to drag certain people out.

Mr. Mikardo claimed that the bus taking employees into the plant had been used "like a projectile" to break through the picket line.

OPEC majority agrees to drop 5% oil rise

BY OUR FOREIGN STAFF

THE MAJORITY group of 11 members of the Organisation of Petroleum Exporting Countries have formally notified Saudi Arabia of its decision not to go ahead with a further 5 per cent. increase in the price of oil.

At that point, however, the Kingdom would still settle for a common price no more than 8 per cent. above 1976 levels.

Ford lays off 16,000 after Dagenham row

BY DAVID CHURCHILL, LABOUR STAFF

THE NUMBER of car workers laid off at Ford plants throughout Britain reached 16,000 yesterday with no prospect of an early settlement to the strike by 500 Dagenham workers, over 100 of whom were laid off.

The strike, which started over the suspension of a single worker, involves a deep-seated grievance among car workers at not being taken into account when laid-off.

Air talks near agreement

BY IAN HARGREAVES

SHORTLY BEFORE midnight last night Britain and the U.S. appeared to have virtually sewn up the basis of a new agreement to replace the Bermuda agreement.

Weather

U.K. TO-DAY: DRY with sunny periods. London, S.E., W. Cent. England, Midlands, E. Angles, Channel Is. Dry sunny periods developing.

Table with columns for Business Centres and Holiday Resorts, listing cities and weather forecasts.

Bitter bother for Allied

THE LEX COLUMN

Allied Breweries' pre-tax profits after six months are 41 per cent. ahead at £39.4m. and turnover is up by a third.

Part of the explanation for the relatively poor performance is Allied's continued heavy exposure to the keg bitter market—Double Diamond is the market leader—where sales volume is falling away as drinkers switch to lager.

Allied's other weak aspect in the past has been its heavy involvement in the U.K. wine and spirits market.

For the rest of the year the group seems reasonably confident and should be capable of profits of close to £80m.

SHIP LAY UP! Need reactivation cost \$1 million? NO.

Ships can be reactivated quickly and... Our experience reactivating VCLLs laid up our Brunei Bay service for 9 months has shown... Full reactivation within 10 days, loading Persian Gulf within 12 days sailing Brunei.